LELAND STANFORD JUNIOR UNIVERSITY

REGISTER FOR 1911-12

LANE

MEDICAL LIBRARY

HISTORY OF MEDICINE
AND NATURAL SCIENCES

Digitized by the Internet Archive
in 2025

https://archive.org/details/twentyfirstannua0000lela

LELAND STANFORD JUNIOR UNIVERSITY

TWENTY-FIRST

ANNUAL REGISTER

1911-12

"The beneficence of the Creator towards man on earth, and the possibilities of humanity, are one and the same."—LELAND STANFORD.

"A generous education is the birthright of every man and woman in America."

STANFORD UNIVERSITY, CALIFORNIA
PUBLISHED BY THE UNIVERSITY
MAY, 1912

CONTENTS

PAGE

Calendar 3
Board of Trustees 4
Officers of Instruction and Administration 5
Organization 34
Admission to the University 41
University Residence. 55
Graduation 66
Departments and Courses of Instruction:
Greek 74
Latin 76
Germanic Languages 80
Romanic Languages 84
English Literature and Rhetoric 89
English Philology 95
Biblical History and Literature 96
Philosophy 97
Psychology 98
Education. 99
History 106
Economics and Social Science 109
Law 112
Graphic Art 126
Mathematics 128
Applied Mathematics 130
Physics 132
Chemistry 135
Botany 140
Physiology and Histology 143
Physical Training 147
Zoology 149
Entomology and Bionomics 152
Geology and Mining 154
Engineering 160
Medicine 173
Marine Biological Laboratory 197
University Library 199
Memorial Church 201
Music 202

PAGE
Lectures, Recitals, Library Contests, Etc. 203
Leland Stanford Junior Museum 214
Degrees Conferred 217
Directory of Officers and Students 225
Alumni Association 297
Index 300

OFFICE DIRECTORY

The office of the President is room 112.
The office of the Registrar is room 116.
The office of the Academic Secretary is room 113.
The office of the Appointment Secretary is room 118.
The office of the Medical Adviser to Women is room 94.
The office of the Dean of Women is room 203.
The office of the Student Adviser is room 265.
The office of the Treasurer is room 250.
The office of the Committee on Public Health is room 95.

The various Departmental offices are given in the Schedule and in the Directory of Officers and Students.

The University Post and Telephone Office is *Stanford University, California.*

The University Railway Station and Telegraph and Express Office is *Palo Alto, California.*

Requests for *Registers,* blanks and other printed matter, and inquiries regarding terms of admission, advanced standing, etc., should be addressed to The Registrar, *Stanford University, California.*

[The rooms in the Inner Quadrangle are numbered consecutively, beginning at the left of the main entrance, ten numbers being allotted to each building. In the Outer Quadrangle forty numbers are allotted to each of the larger buildings and ten numbers to each one-story building, beginning with the Assembly Hall and number 120. The Engineering buildings south of the Quadrangles begin with the number 500. The Chemistry building is on the west avenue between the Quadrangles and the Museum.]

UNIVERSITY CALENDAR

1911

Aug. 28-30	Monday-Wednesday	Registration of Students.
Dec. 14-20	Thursday-Wednesday	End-Semester Examinations.

1912

Jan. 8-9	Monday-Tuesday	Registration for Second Semester
Jan. 10	Wednesday	Instruction begins.
Jan. 12	Friday	Mid-Year Conferring of Degrees.
March 9	Saturday	Founders' Day.
March 30	Saturday	Mid-Semester Recess.
April 7	Sunday	
May 9-15	Thursday-Wednesday	End-Semester Examinations.
May 14	Tuesday	Birthday of Leland Stanford, Jr.
May 20	Monday	Commencement.

Aug. 25	Friday	Birthday of Jane Lathrop Stanford.
Aug. 26	Monday	Registration of Graduate Students
Aug. 27	Tuesday	Registration of New Undergraduates.
Aug. 28	Wednesday	Registration of Matriculated Undergraduates.
Aug. 29	Thursday	Instruction begins.
Sept. 6	Friday	Conferring of Degrees.
Nov. 28	Thursday	Thanksgiving Recess.
Dec. 1	Sunday	
Dec. 14-20	Thursday-Wednesday	End-Semester Examinations.

1913

Jan. 6	Monday	Registration of Graduate Students
Jan. 7	Tuesday	Registration of Undergraduates.
Jan. 8	Wednesday	Instruction begins.
Jan. 10	Friday	Mid-Year Conferring of Degrees.
Feb. 22	Saturday	Washington's Birthday.
March 9	Sunday	Founders' Day.
March 29	Saturday	Mid-Semester Recess.
April 6	Sunday	
May 8-14	Thursday-Wednesday	End-Semester Examinations.
May 14	Wednesday	Birthday of Leland Stanford, Jr.
May 18	Sunday	Baccalaureate Sunday.
May 19	Monday	Commencement.

BOARD OF TRUSTEES

[For Directory of Officers and Committees of the Board, see Index.]

LIFE TRUSTEES	DATE OF APPOINTMENT
HORACE DAVIS	1885
TIMOTHY HOPKINS	1885
GEORGE EDWARD GRAY	1885
JOSEPH DONOHOE GRANT	1891
SAMUEL FRANKLIN LEIB	1891
LEON SLOSS	1891
THOMAS WELTON STANFORD	1893
FRANK MILLER	1893
CHARLES GARDNER LATHROP	1893

ELECTIVE TRUSTEES	TERM EXPIRES
*WHITELAW REID	1912
*GEORGE EDWARD CROTHERS	1912
WILLIAM BABCOCK	1915
CHARLES P. EELLS	1915
VANDERLYNN STOW	1916
JAMES LEROY NICKEL	1919

*Appointed by Mrs. Stanford under ten-year term plan.

OFFICERS OF INSTRUCTION AND ADMINISTRATION*

†DAVID STARR JORDAN, President of the University.

M. S. Cornell, 1872; M. D. Indiana Medical College, 1875; Ph. D. Butler College, 1878; LL. D., Cornell, 1886, Johns Hopkins, 1902, Illinois College, 1903. Instructor in Botany, Cornell, 1871-72; Professor of Natural History, Lombard University, 1872-73; Principal of Appleton (Wis.) Collegiate Institute, 1873-74; Lecturer in Marine Botany at Penikese, 1873-74; Teacher of Natural History, Indianapolis H. S., 1874-75; Professor of Biology, Butler College, 1875-79; Instructor in Botany, Harvard Summer School, Cumberland Gap, 1875-76; Assistant to U. S. Fish Commission, 1877-91; Professor of Zoology, Indiana University, 1879-85; President of Indiana University, 1885-91; President of the California Academy of Sciences, 1896-98, 1901-03, 1908, 1911; U. S. Commissioner in charge of Fur Seal Investigations, 1896-98, of Salmon Investigations, 1904; International Commissioner of Fisheries, since 1908; President of the American Association for the Advancement of Sciences, 1909-10; Member of International Commission of Zoological nomenclature from 1904; Chief Director, World Peace Foundation, since 1910. President of Leland Stanford Junior University, since 1891.

JOHN CASPER BRANNER, Vice-President and Professor of Geology.

B. S. Cornell, 1882; Ph. D., Indiana, 1885; LL. D., Arkansas, 1897, Maryville College, 1909. Assistant Geologist, Imperial Geological Survey of Brazil, 1875-78; Special Botanist in South America, 1880-81; Special Agent of the U. S. Department of Agriculture for Investigating Cotton and the Insects affecting it in Brazil, 1882-83; Topographical Geologist of the Geological Survey of Pennsylvania, Anthracite District, 1883-85; Professor of Geology, Indiana University, 1885-91; State Geologist of Arkansas, 1887-92; President, Geological Society of America, 1904; Member California Earthquake Investigation Commission, 1906-07; Special Assistant Geological Survey of Brazil, 1907-08. At Stanford, since 1891.

OLIVER PEEBLES JENKINS, Professor of Physiology and Histology.

A. B., Moore's Hill College, 1869, A. M., 1872; M. S. Indiana, 1886, Ph. D., 1889; Professor of Natural Science, Moore's Hill College, 1876-82; Professor of Natural Science, Indiana State Normal School, 1883-86; Professor of Biology, De Pauw University, 1886-91. At Stanford, since 1891.

MELVILLE BEST ANDERSON, Professor of English Literature, Emeritus.

A. M., Butler University, 1877; LL. D., Aberdeen, 1906. Professor of Modern Languages, Butler University, 1877-80; Professor of English Literature, Knox College, 1881-86; Professor of Literature and History, Purdue University, 1886-87; Professor of the English Language and Literature, University of Iowa, 1887-91. At Stanford, since 1891.

JOHN MAXSON STILLMAN, Professor of Chemistry.

Ph. B., California, 1874, Ph. D., 1885. Assistant in Chemistry, University of California, 1873-75; Student in Chemistry, Strassburg and Würzburg, 1875-76; Instructor in Organic and General Chemistry, University of

*Arranged in groups in the order of seniority of appointment. For alphabetical Directory of Officers, see Index.

†Absent on leave, first semester, 1911-12.

California, 1876-82; Chemist of the Boston Sugar Refining Company and Superintendent and Chemist of the American Sugar Refining Company, Boston, 1882-91. At Stanford, since 1891.

FERNANDO SANFORD, Professor of Physics.

B. S. Carthage College, 1879, M. S., 1882. Student, University of Berlin, 1886-88; Professor of Physical Science, Mt. Morris College, 1879-82; Superintendent of Schools, Ogle County, Ill., 1882-86; Instructor in Physics and Chemistry, Englewood (Ill.), High School, 1888-90; Professor Physical Science, Lake Forest University 1890-91. At Stanford, since 1891.

CHARLES DAVID MARX, Professor of Civil Engineering.

B. C. E., Cornell, 1878; C. E., Karlsruhe Polytechnicum, 1881. Instructor in Civil Engineering, Karlsruhe Polytechnicum, 1880-81; U S. Assistant Engineer, Missouri River Improvement, 1882-84; Assistant Professor of Civil Engineering, Cornell University 1884-90; Professor of Civil Engineering, University of Wisconsin, 1890-91. At Stanford, since 1891.

CHARLES HENRY GILBERT, Professor of Zoology.

B. S., Butler University, 1879; M. S., Indiana, 1882, Ph, D., 1883. Assistant in Natural Sciences and Modern Languages, Indiana University, 1880-84; Professor of Natural History, University of Cincinnati, 1884-89; Professor of Zoology, Indiana University, 1889-91; Assistant to the U. S. Bureau of Fisheries, since 1880; Assistant in charge of scientific exploration of the U. S. S. "Albatross," 1889, 1890, 1902, 1904, 1906. At Stanford, since 1891.

DOUGLAS HOUGHTON CAMPBELL, Professor of Botany.

Ph. M., Michigan, 1882, Ph. D., 1886. Teacher of Biology, Detroit High School 1882-86; Student at Bonn, Tübingen, and Berlin, 1886-88; Professor of Botany, Indiana University, 1888-91. At Stanford, since 1891.

EWALD FLÜGEL, Professor of English Philology.

Ph. D., Leipzig 1886. Student, Universities of Freiburg and Leipzig, 1882-88; Privat Docent, University of Leipzig, 1888-92. At Stanford, since 1892.

CHARLES BENJAMIN WING, Professor of Structural Engineering.

C. E. Cornell. 1886. Fellow in Civil Engineering, Cornell University, 1886-87, Instructor, 1887-90, Assistant Professor, 1890-91; Engineer, Pompton (N. J.), Powder Co., 1887, Phoenix Powder Co., Farmingdale, N. Y., 1888; Assistant Engineer, Berlin (Conn.) Iron Bridge Co., 1889-90; Professor of Bridge and Hydraulic Engineering, University of Wisconsin, 1891-92. At Stanford, since 1892.

FRANK ANGELL, Professor of Psychology.

B. S., Vermont, 1878; Ph. D., Leipzig, 1891; L. H. D., Vermont, 1892. Teacher in Washington (D. C.) High School, 1880-87; Assistant Professor of Psychology, Cornell University, 1891-92. At Stanford, since 1892.

LEANDER MILLER HOSKINS, Professor of Applied Mathematics.

B. C. E. and B. S., Wisconsin, 1883, M. S., 1885, C. E. 1887. Instructor in Engineering, University of Wisconsin, 1885-89, Assistant Professor of Mechanics, 1889-91, Professor of Theoretical and Applied Mechanics, 1891-92. At Stanford, since 1892.

ROBERT EDGAR ALLARDICE, Professor of Mathematics.

A. M., Edinburgh, 1882. Baxter Scholar in Mathematics, University of Edinburgh, 1882-83, Drummond Scholar in Mathematics, 1883-84; Assistant Professor of Mathematics, University of Edinburgh, 1883-92. At Stanford, since 1892.

AUGUSTUS TABER MURRAY, Professor of Greek.

A. B., Haverford, 1885; Ph. D., Johns Hopkins, 1890. Fellow in Johns Hopkins University, 1887-88; Professor of Greek, Earlham College, 1888-90; Student, Universities of Leipzig and Berlin, 1890-91; Professor of Greek, Colorado College, 1891-92. At Stanford, since 1892.

JAMES OWEN GRIFFIN, Professor of German.

Graduate of the Pennsylvania State Normal School, 1873. Teacher in Pennsylvania State Normal School, 1873-74; Principal Unadilla (N. Y.) Academy, 1874-79; Student, University of Göttingen, 1879-80; Principal of Delaware Academy (Delhi, N. Y.), 1880-85; Instructor in German, Cornell University, 1885-91, Registrar, 1890-91. At Stanford, since 1891.

RUFUS LOT GREEN, Professor of Mathematics.

B. S., Indiana, 1885, A. M., 1889. Instructor in Mathematics, Indiana University, 1885-86, Assistant Professor, 1886-88, Associate Professor, 1889-91, Professor of Pure Mathematics, 1891-93; Student, Johns Hopkins University, 1886-87. At Stanford, since 1893.

ARLEY BARTHLOW SHOW, Professor of Mediæval History.

A. B., Doane College, 1882; Graduate, Andover Theological Seminary, 1885; A. M., Doane, 1892. Pastor Congregational Church, Waco, Neb., 1885-87; Professor of History and English Literature, Doane College, 1887-92; Student, University of Leipzig, 1900-01; Lecturer on History of the Early Church, Pacific Theological Seminary, Oakland, 1905-07. At Stanford, since 1892.

ORRIN LESLIE ELLIOTT, Registrar.

Ph. B., Cornell, 1885, Ph. D., 1890. Fellow in History and Political Science, Cornell University, 1885-86, Instructor in English, 1886-91, Assistant Registrar and President's Secretary, 1890-91. At Stanford, since 1891.

VERNON LYMAN KELLOGG, Professor of Entomology, and Lecturer in Bionomics.

B. S. Kansas, 1889, M. S., 1892. Student, Cornell University, 1891, University of Leipzig, 1893; Assistant Professor of Entomology, University of Kansas, 1890-93, Associate Professor, 1893-94. At Stanford, since 1894.

JAMES PERRIN SMITH, Professor of Paleontology.

A. B., Wofford College, 1884; A. M., Vanderbilt, 1886; Ph. D., Göttingen, 1892. Assistant Geologist and Chemist, Arkansas Geological Survey, 1887-90; Assistant Geologist, U. S. Geological Survey, 1895-1906, Geologist since 1906. At Stanford, since 1892.

LIONEL REMOND LENOX, Professor of Analytical Chemistry.

Ph. B., Columbia, 1888. Assistant Chemist, Bethlehem Iron Co., 1887; Instructor in Chemistry, Lehigh University, 1888-91; Chemist, Ordnance Department, U. S. N., Washington, (D. C.), 1891-92. At Stanford, since 1892.

HENRY RUSHTON FAIRCLOUGH, Professor of Latin.

A. B., Toronto, 1883, A. M., 1886; Ph. D., Johns Hopkins, 1896. Fellow in Classics, University College, Toronto, 1883-84; Classical and English Master, Brockville High School, 1884-86; Graduate Scholar, Johns Hopkins University, 1886-87, Fellow, 1887; Lecturer in Greek and Ancient History, University College, Toronto, 1887-93; Professor of Latin, University of Wisconsin, Summer Session, 1906, Columbia University, Summer Session, 1908, University of Chicago, Summer Quarter, 1910; Professor of Latin, American School of Classical Studies, Rome, 1910-11. At Stanford, since 1893.

WILLIAM FREDERICK DURAND, Professor of Mechanical Engineering.

Graduate U. S. Naval Academy, 1880; Ph. D., Lafayette, 1888, Engineer Corps, U. S. Navy, 1880-87; Special Duty as Assistant Professor of Mechanical Engineering, Lafayette College, 1883-85, Worchester Polytechnic Institute, 1887; Professor of Mechanics and Superintendent of Mechanical Department, Michigan State Argicultural and Mechanical College, 1887-91; Professor of Marine Engineering and Principal Graduate School of Naval Architecture and Marine Engineering, Cornell University, 1891-1904. At Stanford, since 1904.

‡HARRIS JOSEPH RYAN, Professor of Electrical Engineering.

M. E., Cornell, 1887. With Western Engineering Co., Lincoln, Neb., 1887-88; Instructor in Physics, Cornell University, 1888-89, Assistant Professor of Electrical Engineering, 1889-92, Associate Professor, 1892-95, Professor, 1895-1905; Judge Board of Awards, World's Fair, Chicago, 1893; U. S. Government Delegate, International Electrical Congress, St. Louis Exposition, 1904. At Stanford, since 1905.

GEORGE HEMPL, Professor of Germanic Philology.

A. B., Michigan, 1879; Ph. D., Jena, 1889; LL. D., Wisconsin, 1904. Principal Saginaw (Mich.), H. S., 1879-82, La Porte (Ind.) H. S., 1882-84; Instructor in German, Johns Hopkins University, 1884-86; Student, Universities of Göttingen, Tübingen, Strassburg, Jena, and Berlin, 1886-89; Assistant Professor of English, University of Michigan, 1889-93, Junior Professor, 1893-97, Professor of English Philology and General Linguistics, 1897-1906, Professor of English, University of Chicago, Summer Quarter, 1897; President of the American Dialect Society, 1900-05; President of the Modern Language Association, 1902-03; President of the American Philological Association, 1903-04. At Stanford, since 1906.

EPHRAIM DOUGLASS ADAMS, Professor of History.

A. B., Michigan, 1887, Ph. D., 1890. Principal of High School, McGregor (Ia.), 1887; Principal of High School, Saginaw (Mich.), 1889; Special Agent in Charge of Street Railways, Eleventh Census, Washington (D. C.), 1890; Assistant Professor and afterward Professor of European History, University of Kansas, 1891-1902; Instructor in History, University of California, Summer Session, 1910. At Stanford, since 1902.

†EDWARD CURTIS FRANKLIN, Professor of Organic Chemistry.

B. S., Kansas, 1888, M. S., 1890; Ph. D., Johns Hopkins, 1894. Chemist to the Palo Alto Plantation and Sugar Factory, Donaldson (La.), 1888; Chemist to the Bella Vista Mining and Milling Co., Los Quemados, Costa Rica, 1897; Instructor in Chemistry, University of Kansas, 1888-90; Student, University of Berlin, 1890-91; Assistant in Chemistry, University of Kansas, 1891-93, Associate Professor, 1894-99, Professor of Physical Chemistry, 1899-1903; Member of the U. S. Assay Commission, 1907. At Stanford, since 1903.

ELLWOOD PATTERSON CUBBERLEY, Professor of Education.

A. B., Indiana, 1891; A. M., Columbia, 1902, Ph. D., 1905. Instructor in Science, Ridgeville College (Ind.), 1891; Professor of Physical Science, Vincennes University (Ind.), 1891-93, President, 1893-96; Superintendent of City Schools, San Diego (Cal.), 1896-98; Honorary Fellow, Columbia University, 1901-02, 1904-05; Professor of Education, University of Chicago, Summer Quarter, 1910, Harvard University, second half-year, 1910-11. At Stanford, since 1898.

‡Absent on leave, 1911-12.
†Absent on leave, second semester, 1911-12.

ALPHONSO GERALD NEWCOMER, Professor of English.

A. B., Michigan, 1887; A. M., Cornell, 1888. Fellow in Classics, Cornell University, 1887-88; Principal, Mt. Morris (Ill.) H. S., 1888-89; Instructor in Latin and French, Knox College, 1889-91. At Stanford, since 1891.

†CHARLES HENRY HUBERICH, Professor of Law.

LL. B., Texas, 1897, LL. M., 1898; D. C. L., Yale, 1899; J. U. D., Heidelberg, 1905; LL. D., Melbourne, 1907. Student, Universities of Berlin and Heidelberg, 1899-1900; Instructor in Political Science and Law, University of Texas, 1900-03, Adjunct Professor, 1903-05; Professor of Law, University of Chicago, Summer Session, 1907; Acting Professor of Law, University of Wisconsin, 1909-10. At Stanford, since 1905.

STEWART WOODFORD YOUNG, Professor of Physical Chemistry.

B. S., Cornell, 1890. Assistant in Chemistry, Cornell University, 1890-91; Instructor in Chemistry, Swarthmore College, 1891-93. At Stanford, since 1893.

FREDERIC CAMPBELL WOODWARD, Professor of Law.

LL. B., Cornell, 1894, LL. M., 1895; A. M., Dickinson College, 1902. Attorney at Law, practicing in New York City, 1895-98; Professor of Law, Dickinson College, 1898-1902; Professor of Law, Northwestern University, 1902-07; Professor of Law, University of Chicago, Summer Quarter, 1908. At Stanford, since 1907.

JOHN CHARLES LOUNSBURY FISH, Professor of Railroad Engineering.

C. E., Cornell, 1892. Instructor in Civil Engineering, Cornell University, 1892-93; Division Engineer, Lake Shore and Michigan Southern Railway, 1906-08. At Stanford, since 1893.

BURT ESTES HOWARD, Professor of Political Science.

A. B., Western Reserve, 1883, A. M., 1886; A. M., Harvard, 1900; Ph. D., Heidelberg, 1903. Student, University of Berlin, 1903-04; Assistant Professor of Political Science, Leland Stanford Junior University, 1900-01, Acting Associate Professor, 1901-02. At Stanford, 1900-02, and since 1908.

ADOLPH BARKAN, Professor of Structure and Diseases of the Eye, Ear, and Larynx, Emeritus.

M. D., University of Vienna, 1866; LL. D., University of Glasgow, 1901. Professor of Ophthalmology and Otology, Medical Department, University of the Pacific, 1872-82, Cooper Medical College, since 1882; Member of the Heidelberg Ophthalmological Society; Member of the Otological Society of Germany; Eye and Ear Surgeon, Lane Hospital, since 1895. At Stanford, since 1909.

*HENRY GIBBONS, JR., Professor of Obstetrics, Emeritus.

M. D., University of the Pacific, 1863; A. M., 1891. Dean of the Medical Department of the University of the Pacific, 1870-82, Professor of Materia Medica, 1870-73, of Obstetrics and Diseases of Women and Children, 1873-82; Dean of Cooper Medical College and Professor of Obstetrics and Diseases of Women and Children, since 1882; President of the State Medical Society of California, 1896; Visiting Obstetrician to Lane Hospital, since 1895; Member of American Association of Obstetricians and Gynecologists. At Stanford, since 1909.

---

†Absent on leave, 1911-12.
*Died September 27, 1911.

JOSEPH OAKLAND HIRSCHFELDER, Professor of Clinical Medicine.

M. D., University of Leipzig, 1876. Professor of Materia Medica, Medical College of the Pacific, 1877-81, Professor of Clinical Medicine, 1881-82; Professor of Clinical Medicine, Cooper Medical College, since 1882; Visiting Physician, City and County Hospital of San Francisco, since 1878; Visiting Physician, Lane Hospital, since 1895. At Stanford, since 1909.

STANLEY STILLMAN, Professor of Surgery.

M. D., Cooper Medical College, 1889. Adjunct Professor of Surgery, Cooper Medical College, 1895-98, Professor of Surgery, since 1898; Assistant Visiting Surgeon, City and County Hospital, San Francisco, 1891-99, Visiting Surgeon, since 1899; Visiting Surgeon, Lane Hospital, since 1895; Fellow of the American Surgical Association. At Stanford, since 1909.

EMMET RIXFORD, Professor of Surgery.

B. S., California, 1887; M. D., Cooper Medical College, 1891. Adjunct Professor of Surgery, Cooper Medical College, 1893-98, Professor, since 1898; Visiting Surgeon, Lane Hospital, 1895, City and County Hospital, San Francisco, since 1899; Fellow, American Surgical Association, 1901; Member Society of Clinical Surgery, 1903. At Stanford, since 1909.

WILLIAM OPHÜLS, Professor of Pathology.

M. D., University of Göttingen, 1895. Assistant at the Pathologic Institute at Göttingen, 1896-97; Professor of Pathology and Bacteriology, University of Missouri, 1897-98; Professor of Pathology and Bacteriology, Cooper Medical College, since 1898; Pathologist, Lane Hospital, since 1898. Member of the Association of American Pathologists and Bacteriologists; Member of the Society for Experimental Biology and Medicine. At Stanford, since 1909.

RAY LYMAN WILBUR, Professor of Medicine.

A. B., Stanford, 1896, A. M., 1897; M. D., Cooper Medical College, 1899. Assistant in Physiology, Leland Stanford Junior University, 1894-96, Instructor, 1896-97, Assistant Professor, 1900-03; Lecturer and Demonstrator in Physiology, Cooper Medical College, 1899-1900. At Stanford 1894-97, 1900-03, and since 1909.

ARTHUR WILLIAM MEYER, Professor of Human Anatomy.

B. S., Wisconsin, 1898; M. D., Johns Hopkins, 1905; Assistant and Instructor in Anatomy, Johns Hopkins University, 1905-07; Assistant Professor of Anatomy, University of Minnesota, 1907-08; Professor of Anatomy, Northwestern University, 1908-09. At Stanford, since 1909.

FRANK MACE McFARLAND, Professor of Histology.

Ph. B., De Pauw, 1889; A. M., Stanford, 1893; Ph. D., Würzburg, 1896. Professor of Biology and Geology, Olivet College, 1889-92; Student, Würzburg, Zürich, and Naples, 1894-96. At Stanford, since 1892.

HAROLD HEATH, Professor of Zoology.

A. B., Ohio Wesleyan, 1893; Ph. D., Pennsylvania, 1898. Assistant in Biology, Ohio Wesleyan University, 1891-93; Professor of Biology, University of the Pacific, 1893-94; Harrison Fellow in Zoology, University of Pennsylvania, 1896-98. At Stanford, since 1894.

ARTHUR MARTIN CATHCART, Professor of Law.

A. B., Stanford, 1896. Student, Harvard University, 1896-97; Registered Office Clerk with Attorneys of Colorado Supreme Court, 1900-02; Attorney at Law, Colorado Springs (Colo.), 1903-04; after 1896-98, then Lecturer in Law, University of California, summer session, 1908; Professor of Law, University of Chicago, summer quarter, 1911. At Stanford, since 1904.

†WESLEY NEWCOMB HOHFELD, Professor of Law.

A. B., California, 1901; LL. B., Harvard, 1904. Attorney at Law, San Francisco, 1904-05; Instructor, Hastings College of Law, University of California, 1905; Member of Faculty of Law, University of California, Summer Session, 1907; Member of Faculty of Law, University of Chicago, Summer Quarter, 1908, 1910. At Stanford, since 1905.

GUIDO HUGO MARX, Professor of Machine Design.

M. E., Cornell, 1893. With Gleason Tool Co., Rochester (N. Y.), 1893-94; with Bement, Miles & Co., Philadelphia, 1894-95. At Stanford, since 1895.

HENRY WALDGRAVE STUART, Professor of Philosophy.

Ph. B., California, 1893; Ph. D., Chicago, 1900. Teacher, Hollister (Cal.) H. S., 1893-94; Fellow in Political Economy, University of Chicago, 1894-96; Instructor (pro tem) in Economics and Psychology, Washington University, St. Louis, 1896-97; Teacher, Central School, Oakland (Cal.), 1897-98; Principal, Woodland (Cal.) H. S., 1898-99; Fellow in Philosophy, University of Chicago, 1899-1900; Instructor in Economics and History, Ripon College, 1900-01; Instructor in Philosophy, State University of Iowa, 1901-04; Acting Professor of Philosophy, Lake Forest College, 1904-05, Assistant Professor, 1905-07. At Stanford, since 1907.

GEORGE CLINTON PRICE, Professor of Zoology.

B. S., De Pauw, 1890; Ph. D., Stanford, 1897. Student in Biology, Johns Hopkins University, 1890-92; University of Munich, 1895-96. At Stanford, since 1892.

GEORGE JAMES PEIRCE, Professor of Botany and Plant Physiology.

S. B., Harvard, 1890; A. M., and Ph. D., Leipzig, 1894. Assistant in Botany, Harvard University and Radcliffe College, 1890-92; Parker Fellow in Harvard University, studying in Bonn, Leipzig, and Munich, 1892-94; Assistant Professor of Botany, Indiana University, 1895-97; Acting Professor of Botany, University of Wisconsin, second semester, 1910-11. At Stanford, since 1897.

ALBERT CORNELIUS CRAWFORD, Professor of Pharmacology.

M. D., College of Physicians and Surgeons, Baltimore, 1893. Student at Johns Hopkins University, 1887-90, 1891-94, 1903. Assistant in Pharmacology, Johns Hopkins Medical School, 1894-1900; Pharmacologist, Bureau of Plant Industry, United States Department of Agriculture, 1904-08; Physiologist, Bureau of Animal Industry, United States Department of Agriculture, 1908-10. At Stanford, since 1910.

HANS ZINSSER, Professor of Bacteriology.

A. B., Columbia, 1899, M. D., 1903. Roosevelt Hospital, New York, 1903-05, Bacteriologist, 1904; Bacteriologist, St. Luke's Hospital, New York, 1905-10; Instructor in Bacteriology and Hygiene, Columbia University, 1906-10. At Stanford, since 1910.

ROBERT ECKLES SWAIN, Profesor of Physiological Chemistry.

A. B., Stanford, 1899; M. S., Yale, 1901, Ph. D., 1904. Student, Universities of Strassburg and Heidelberg, 1901-02, Yale University, 1909-10. At Stanford, since 1898.

†LILLIEN JANE MARTIN, Professor of Psychology.

A. B., Vassar, 1880. Teacher of Science, Indianapolis High School, 1880-89; Vice-Principal and Head of Department of Science, Girls High School, San Francisco, 1889-94; Student, University of Göttingen, 1894-98. At Stanford, since 1899.

---

†Absent on leave, 1911-12.

CHARLES ANDREWS HUSTON, Professor of Law.

A. B., Chicago, 1902, J. D., 1907. Fellow in Political Economy, University of Chicago, 1902-03, Assistant in Rhetoric, 1903-04, Associate in Rhetoric, 1904-06. At Stanford, since 1906.

ALVIN SAUNDERS JOHNSON, Professor of Economics.

A. B., Nebraska, 1897, A. M., 1898; Ph. D., Columbia, 1902. Reader in Economics, Bryn Mawr College, 1901-02; Tutor, Instructor, and Adjunct Professor of Economics, Columbia University, 1902-06; Professor of Economics, University of Nebraska, 1906-08; Professor of Economics, University of Texas, 1908-10; Acting Associate Professor of Economics, University of Chicago, Summer and Fall Quarters, 1909, Associate Professor, 1910-11. At Stanford, since 1911.

†ALBERT CONSER WHITAKER, Professor of Economics.

A. B., Stanford, 1899; Ph. D., Columbia, 1904. Scholar in Economics, Columbia University, 1899-1900, Fellow, 1900-01; Student, University of Berlin, 1901-02; Lecturer in Economics and Social Science, Columbia University, 1906-07. At Stanford since 1902.

‡ALFRED BAKER SPALDING, Professor of Obstetrics and Gynecology.

A. B., Stanford, 1896; M. D., Columbia, 1900. Home Surgeon, General Memorial Hospital, New York, 1900-01; Assistant Resident Physician, Sloane Maternity Hospital, New York, 1901-02; Instructor in Obstetrics, University of California, 1902-05, Assistant Professor, 1905-09, Professor, 1909-12; Student in Special Pathology, Universities of Berlin and Vienna, 1911.

‡MURRAY SHIPLEY WILDMAN, Professor of Economics.

A. B., Earlham, 1893; Ph. D., Chicago, 1904. Professor of History and Economics, Central College (Mo.), 1904-05; Instructor in Economics, University of Missouri, 1905-06, Assistant Professor, 1906-08; Acting Assistant Professor, University of Chicago, Summer Quarter, 1909; Assistant Professor of Economics and Commerce, Northwestern University, 1909-11, Professor, since 1911.

GEORGE THOMAS CLARK, Librarian.

B. S., California, 1886. Assistant Librarian, University of California 1886-87; Deputy State Librarian, California State Library, 1887-90, Classifier, 1890-94; Librarian, San Francisco Public Library, 1894-1907. At Stanford, since 1907.

WILLIAM RANKINE ECKART, Professor of Mechanical Engineering.

M. E., Cornell, 1895. Mechanical Engineer, Siemens Halske Electric Co., Chicago, 1895-96; Construction Engineer, Allison Ranch Mine, Grass Valley (Cal.), 1896-98; Testing work for Frazer & Chalmers, in Hawaii and Mexico, 1898-99; with W. R. Eckart, Consulting Engineer, Hydraulic Power Plants and Mining Work, 1899-1903, summers of 1904-08; Consulting Engineer, Geary St. P. & O. R. R., San Francisco, 1902-06. At Stanford, since 1903.

EDWARD BENJAMIN KREHBIEL, Professor of History.

A. B., Kansas, 1902; Ph. D., Chicago, 1906. Graduate Student, University of Chicago, 1902-06, Fellow, 1903-05, Assistant, 1904-06; Graduate Student, Harvard University, 1904; Student, Ecole de Chartes, Paris, 1905; Instructor, University of Chicago High School, 1905-06; Assistant in History, University of Chicago, 1906-07, Instructor, 1907-09. At Stanford, since 1909.

---

†Absent on leave, second semester, 1911-12.
‡Beginning August, 1912.

JOSEPH WALTER BINGHAM, Professor of Law.

A. B., Chicago, 1902, J. D., 1904. In practice of law, Chicago, 1904-05; Acting Assistant Professor of Law, Cornell University, 1905-07. At Stanford, since 1907.

WILLIAM FITCH CHENEY, Clinical Professor of Medicine.

B. L., California, 1885; M. D., Cooper Medical College, 1889; Post-graduate courses, Johns Hopkins Medical School, 1893; Professor of Principles and Practice of Medicine, Cooper Medical College, since 1898; First Lieutenant, Medical Reserve Corps, U. S. A., 1908. Member of the American Medical Association, and of the National Association for the Study and Prevention of Tuberculosis. At Stanford, since 1909.

†WILLIAM FREEMAN SNOW, Clinical Professor of Hygiene and Public Health.

A. B., Stanford, 1896, A. M., 1897; M. D., Cooper Medical College, 1900. Student, Johns Hopkins Medical School, 1901-02; Secretary, California State Board of Health, since 1909. At Stanford, since 1901.

‡GEORGE BURBANK SOMERS, Clinical Professor of Gynecology.

A. B., Harvard, 1886; M. D., Cooper Medical College, 1888. Chief Surgeon, San Francisco Emergency Hospitals, 1891-95; Adjunct to Chair of Gynecology, Cooper Medical College, 1889, Professor of Gynecology, 1901; Gynecologist to Lane Hospital, since 1900. At Stanford, since 1911.

§LANGLEY PORTER, Clinical Professor of Medicine, in charge of Pediatrics.

B. S., Pennsylvania Military College, 1890; M. D., Cooper Medical College, 1896; L. R. C. P., M. R. C. S., England, 1900. House Physician, St. Luke's Hospital, San Francisco, 1897; Senior Dresser, London Hospital, 1900; Resident Physician, St. Mark's Hospital, London, 1901-02; City Physician, in charge of Contagious Diseases, San Francisco, 1903-08; Assistant Professor of Pediatrics, Cooper Medical College, 1908, Associate Professor, 1909-12. At Stanford, since 1912.

§RUFUS LEE RIGDON, Clinical Professor of Surgery.

M. D., Cooper Medical College, 1887. Assistant and Instructor in Genito-Urinary Clinic, Cooper Medical College, 1888-98, Associate Professor of Genito-Urinary Surgery and Chief of Genito-Urinary Clinic, 1898-1908, Professor of Genito-Urinary Surgery, 1908-12. At Stanford, beginning July 1, 1912.

§ALBERT BROWN McKEE, Clinical Professor of Surgery.

Ph. B., University of the Pacific, 1883, Ph. M., 1886; M. D., Cooper Medical College, 1886. Student in London and Vienna, 1893-96; Instructor and Acting Head of the Eye, Ear, Nose, and Throat Division, University of California Medical Department, 1902-08; Associate Professor of Ophthalmology, Cooper Medical College, 1908-12. At Stanford, beginning July 1, 1912.

§EDWARD CECIL SEWALL, Clinical Professor of Surgery, in charge of Ear, Nose, and Throat Clinic.

A. B., Stanford, 1898; M. D. Cooper Medical College, 1902. Assistant and Instructor in Ophthalmology, Cooper Medical College, 1901-07, Assistant Professor, 1907-09; Student in Freiburg, 1909-10; Associate Professor of Diseases of Eye, Ear, Nose, and Throat, Cooper Medical College, 1910-12. At Stanford, beginning July 1, 1912.

HOWARD LESLIE SMITH, Acting Professor of Law.

A. B., University of Wisconsin, 1881, LL. B., 1885. Principal, Elkhorn (Wis.) H. S., 1881-83; Stndent, Universities of Heidelberg and Paris, 1883-84; Attorney at Law, Madison (Wis,), 1885-87, St. Paul (Minn.), 1887-93, Chicago, 1893-1900; Professor of Law, University of Wisconsin, since 1900. At Stanford, 1909-10, 1911-12.

---

†Absent on leave, 1911-12.
‡Beginning January, 1912.
§Beginning August, 1912.

ARTHUR BRIDGMAN CLARK, Associate Professor of Graphic Arts.

B. Ar., Syracuse, 1888, M. Ar., 1891. Director of Trade Schools and Instructor in Drawing, New York State Reformatory, Elmira (N. Y.), 1888-89; Instructor in Architecture, Syracuse University, 1889-92. At Stanford, since 1892.

GEORGE ARCHIBALD CLARK, Academic Secretary.

B. L., Minnesota, 1891. Secretary, U. S. Fur Seal Commission, 1896-98; Assistant, Department of Commerce and Labor, in Charge of fur seal investigation on the Pribilof Islands, 1909. At Stanford, since 1891.

OLIVER MARTIN JOHNSTON, Associate Professor of Romanic Languages.

A. B., Mississippi College, 1890, A. M., 1892; Ph. D., Johns Hopkins 1896. Principal, Preparatory Department, Mississippi College, 1890-91, Professor of English, 1891-93; Fellow in Johns Hopkins University, 1895-96; Lecturer in French Philology, Bryn Mawr College, 1896-97. At Stanford, since 1897.

DAVID CHARLES GARDNER, Chaplain.

Graduate Church Divinity School of the Pacific, San Mateo, 1897. Curate, St. James Mission, San Francisco, 1898; Rector of All Saints Church, Palo Alto, 1898-1902. At Stanford, since 1902.

HANS FREDERICK BLICHFELDT, Associate Professor of Mathematics.

A. B., Stanford, 1896; Ph. D., Leipzig, 1898. At Stanford, since 1898.

FREDERICK JOHN ROGERS, Associate Professor of Physics.

M. S., Cornell, 1891. Instructor in Physics, Cornell University, 1892-1900. At Stanford, since 1900.

KARL GUSTAV RENDTORFF, Associate Professor of German.

A. M., Stanford, 1894, Ph. D., 1896. Student, University of Giessen, 1884-85, University of Kiel, 1885-91. At Stanford, since 1894.

WILLIAM ALPHA COOPER, Associate Professor of German.

A. B., Marietta, 1892, A. M., 1897. Student, Universities of Bonn, Leipzig, and Paris, 1892-94; Insructor in German and French, Marietta College, 1895-99, Professor, 1899-1901. At Stanford, since 1901.

HALCOTT CADWALADER MORENO, Associate Professor of Applied Mathematics.

A. B., University of Georgia, 1893, A. M., 1894, B. L., 1896; Ph. D., Clark, 1900. Tutor in Mathematics, University of Georgia, 1893-97; Scholar and Fellow in Mathematics, Clark University, 1897-1900; Assistant in Mathematics, Clark University, 1900-01. At Stanford, since 1901.

SIDNEY DEAN TOWNLEY, Associate Professor of Applied Mathematics and Astronomy.

B. S., Wisconsin, 1890, M. S., 1892; D. Sc., Michigan, 1897. Fellow in Astronomy, University of Wisconsin, 1890-91, Assistant in Astronomy and Mathematics, 1891-92; Hearst Fellow in Astronomy, University of California (Lick Observatory), 1892-93; Instructor in Astronomy, University of Michigan, 1893-95, 1896-98; Student, Universities of Berlin and Munich, 1895-96; Instructor in Practical Astronomy, University of California, 1898-1903, Lecturer in Astronomy, 1904-07; Astronomer in charge of International Latitude Observatory, 1903-07. At Stanford, since 1907.

COLBERT SEARLES, Associate Professor of Romanic Languages.

A. B., Wesleyan University, 1895; Ph. D., Leipzig, 1899. Instructor in French and Italian, Indiana University, 1899-1900; Associate Professor of English and Modern Languages, University of Arkansas, 1900-01. At Stanford, since 1901.

JEFFERSON ELMORE, Associate Professor of Latin,

A. B., Stanford, 1895, A. M., 1895, Ph. D., 1901. Principal of Merced County High School, 1895-97; Student, Universities of Bonn and Berlin, 1901-02. At Stanford, since 1898.

HARRY ALVIN MILLIS, Associate Professor of Economics.

A. B., Indiana, 1895, A. M., 1896; Ph. D., Chicago, 1899. Reference Librarian, John Crerar Library, Chicago, 1899-1902; Professor of Economics and Sociology, University of Arkansas, 1902-03. At Stanford, since 1903.

AUSTIN FLINT ROGERS, Associate Professor of Mineralogy and Petrography.

A. B., Kansas, 1899, A. M., 1900; Ph. D., Columbia, 1902. Assistant in Mineralogy, University of Kansas, 1898-1900; Assistant Geologist, University Geological Survey of Kansas, 1898-1900, 1903; Fellow in Mineralogy, Columbia University, 1900-02, Tutor in Mineralogy, 1902-05. At Stanford, since 1905.

JOHN OTTERBEIN SNYDER, Associate Professor of Zoology.

A. B., Stanford, 1897, A. M., 1899. Assistant U. S. Fish Commission, 1897, 1899, 1904; Naturalist on U. S. S. Albatross engaged in deep sea investigations, 1902, 1906. At Stanford, since 1897.

CLARA S. STOLTENBERG, Associate Professor of Physiology.

A. B., Stanford, 1896, A. M., 1897. At Stanford, since 1896.

LEROY ABRAMS, Associate Professor of Botany, and Curator of the Dudley Herbarium.

A. B., Stanford, 1899, A. M., 1902; Ph. D., Columbia, 1910. Acting Professor of Botany, University of Idaho, 1899-1900; Assistant in Botany, Stanford, 1900-02, Instructor, 1902-04; Fellow in Botany, Columbia University, 1904-05; Assistant Curator, Division of Plants, United States National Museum, 1905-06. At Stanford, 1900-04, and since 1906.

PERCY ERWIN DAVIDSON, Associate Professor of Education.

A. B., Stanford, 1898; A. M., Harvard, 1905. Teacher, Grammar and High Schools, San Diego (Cal.), 1898-1900; Supervisor of History and English Teaching, San Francisco State Normal School, 1900-03; Assistant in Education, San Diego State Normal, 1903-04; Graduate Student, Teachers' College, Columbia University, 1905-07; Instructor in Logic and History of Education, New York Training School for Teachers, 1906-07. At Stanford, since 1907.

RUFUS CLARENCE BENTLEY, Associate Professor of Education.

A. B., Nebraska, 1894, A. M., 1896. Assistant in Psychology, University of Nebraska, 1893-96; Principal of Schools, Shelton (Neb.), 1896-97; Principal of High School, Martinez (Cal.), 1897-98; Principal of High School and Supervising Principal of Schools, San Rafael (Cal.), 1898-1900; Fellow, Columbia University, 1900-01; Fellow, Clark University, 1901-03; Dean of Clark College, 1902-09, Professor of Latin, 1902-04, Professor of Pedagogy, 1904-09.

NOAH FIELDS DRAKE, Associate Professor of Economic Geology.

C. E., Arkansas University, 1888; A. B., Stanford, 1894, A. M., 1895, Ph. D., 1897. Secretary and Manager, Tientsin Land Investment Co., Limited, 1901-02; Consulting Geologist, American-China Development Co., 1902-04; Professor of Geology and Mining, Imperial Pei Yang University, Tientsin, China, 1898-1900, and 1905-11.

DAVID MORRILL FOLSOM, Associate Professor of Mining.

A. B., Stanford, 1902, Engineer, 1904. Student Columbia School of Mines, 1902-03; Engineer with Boston and Montana Consolidated Copper and Silver Mining Co., 1904-09.

GALEN HOWELL CLEVENGER, Associate Professor of Metallurgy.

B. S., South Dakota School of Mines, 1901, E. M., 1908; A. M., Columbia, 1903. Superintendent and Proprietor Tailings Plant Operating Cyanide Process, Rapid City (S. D.), 1899-1901; Assayer and Chemist, Dakota Mining Co., Deadwood (S. D.), 1901-02; Research Metallurgist, National Smelting Co., Rapid City (S. D.), and Horseshoe Mining Co., Terry (S. D.), 1903-04; Special Assistant, U. S. Geological Survey, in charge of Electric Smelting Experiments at Portland (Or.), 1904-05; Consulting Metallurgical Engineer for companies operating in the United States, Mexico, and Central America; Special Study of Hydro-Metallurgical Methods in Mexico, 1906-09. At Stanford, 1904-06, and since 1909.

PAYSON JACKSON TREAT, Associate Professor of History.

A. B., Wesleyan, 1900; A. M., Columbia, 1903; Ph. D., Stanford, 1910. Instructor in History, Barnard School, New York City, 1900-03; Graduate Student, Leland Stanford Jr. University, 1903-05; Research Student in Far East, 1906-07; Instructor in Government, Harvard University, 1908-09. At Stanford, since 1905.

ERNEST WHITNEY MARTIN, Associate Professor of Greek.

A. B., Chicago, 1900; A. M., Stanford, 1902, Ph. D., 1910. Instructor in Latin and Greek, Private School Clarinda (Ia.), 1895-96, Principal of High School, 1896-98; Student, University of Berlin, and American School of Classical Studies, Rome, 1900-01; Acting Professor of Latin and Greek, University of Nevada, 1908-09, Professor of Greek, 1909-10. At Stanford, since 1901.

LEWIS MADISON TERMAN, Associate Professor of Education.

A. B., Indiana, 1902, A. M., 1903; Ph. D., Clark University, 1905. Fellow in Psychology and Education, Clark University, 1903-05; Principal of High School, San Bernardino (Cal.), 1905-06; Head of Department of Child Study and Pedagogy, Los Angeles State Normal School, 1906-10; Instructor in Education, Indiana University, Summer Session, 1909. At Stanford, since 1910.

BENJAMIN OLIVER FOSTER, Associate Professor of Latin.

A. B., Stanford, 1895; A. M., Harvard, 1897, Ph. D., 1899. Parker Fellow of Harvard University, studying in the American School of Classical Studies in Rome, 1899-1900; Acting Professor of Latin and Greek, State Normal College of Michigan, 1900-01; Instructor, University of California, Summer Session, 1908. At Stanford, since 1901.

†MACY MILLMORE SKINNER Associate Professor of German.

A. B., Harvard, 1894, A. M., 1895, Ph. D., 1897. Harvard Fellow, University of Strassburg, 1897-98, University of Berlin, 1898-99; Instructor in German, Harvard University, 1899-1905. At Stanford, since 1905.

HENRY LEWIN CANNON, Associate Professor of History.

A. B., Western Reserve, 1893; Ph. D., Pennsylvania, 1898. Student, Harvard University, 1893-94, Yale University, 1896-97; Fellow in European History, University of Pennsylvania, 1897-98; Instructor in History, University of Cincinnati, 1900-03. At Stanford, since 1903.

§HARRY EVERETT ALDERSON, Associate Clinical Professor of Medicine.

M. D., California, 1900. Interne and Resident Physician, Southern Pacific Hospital, 1900-02; Student, Johns Hopkins and Columbia Universities, 1906; Assistant in Skin Diseases, Medical Department of University of California, 1906-12; Professor of Art Anatomy, California School of Design, 1906-12; Chief of Dermatological Clinic, San Francisco Fruit and Flower Mission.

---

†Absent on leave, 1911-12.
§Beginning August, 1912.

JAMES ROLLIN SLONAKER, Assistant Professor of Physiology.

B. S., Wisconsin, 1893; Ph. D., Clark, 1896. Fellow in Biology, Clark University, 1893-96; United States Fish Commission, Woods Holl (Mass.), summer, 1895; Instructor in Zoology, Indiana University, 1896-99, Indiana University Biological Station, 1896-1900; Assistant Professor of Zoology, Indiana University, 1899-1901; Research Assistant in Neurology, University of Chicago, 1901-02, Associate in Neurology, 1902-03. At Stanford, since 1903.

SAMUEL SWAYZE SEWARD, Jr., Assistant Professor of English.

A. B., Columbia, 1896, A. M., 1897. Scholar in Literature, Columbia University, 1896-97; Assistant in Literature, 1897-99; Student Oxford University, 1899-1900; Acting Professor of English, University of Nevada, 1907; Assistant Professor of English, University of California, Summer Session, 1907, University of Oregon, Summer Session, 1908. At Stanford, since 1900.

HOWARD JUDSON HALL, Assistant Professor of English.

B. S., Michigan State Agricultural College, 1890; A. B., Stanford, 1896; A. M., Harvard, 1900. Professor of English and Librarian, University of Arizona, 1891-1904. At Stanford, since 1904.

ELMER REGINALD DREW, Assistant Professor of Physics.

B. S., California, 1888; Ph. D., Cornell, 1903. Student, University of Chicago, 1897-98, University of Berlin, 1903-05; Assistant in Physics, University of California, 1889-92, Instructor, 1892-1902. At Stanford, since 1905.

LEE EMERSON BASSETT, Assistant Professor of English.

A. B., Stanford, 1901. Graduate, Cumnock School of Oratory, Los Angeles, 1898; Instructor in Public Speaking, University of Southern California 1898-99; Student, School of Expression, Boston, 1901; Student, Department of Literature, University of Chicago, summer 1904; Student of Oxford, 1907-08. At Stanford, since 1901.

HENRY DAVID GRAY, Assistant Professor of English.

Ph. B., Colgate, 1897; A. M., Columbia, 1898, Ph. D., 1904. Assistant in German and French, Colgate Academy, 1896-97; University Scholar, Columbia University, 1898-1900; Instructor in Dramatic Literature, American Academy of Dramatic Arts, 1900-02; Instructor in English, University of Texas, 1902-05; Lecturer in English, Columbia University, Summer Session, 1905. At Stanford, since 1905.

WILLIAM DINSMORE BRIGGS, Assistant Professor of English.

A. B., Stanford, 1896; A. M., Harvard, 1899, Ph. D., 1900. Student Johns Hopkins University, 1896-97; Instructor in English and German, University of Vermont, 1900-01; Instructor in English, Western Reserve University, 1901-06. At Stanford, since 1906.

JOHN EZRA McDOWELL, Assistant Registrar.

A. B., Stanford, 1900. At Stanford, since 1900.

CLIFFORD GILMORE ALLEN, Assistant Professor of Romanic Languages.

A. B., Boston, 1900; A. M., Stanford, 1903; Docteur de l'Université de Paris, 1906. Student, University of Paris, 1903-04; Fellow of Boston University and Student of Universities of Paris and Madrid, 1904-05. At Stanford, since 1901.

WILLIAM ALBERT MANNING, Assistant Professor of Mathematics.

A. B., Willamette University, 1900; A. M., Stanford, 1902, Ph. D., 1904. Acting Assistant Professor of Mathematics, University of Illinois, 1909-10 At Stanford, since 1900.

JOSEPH GRANT BROWN, Assistant Professor of Physics.

A. B., Stanford, 1901, A. M., 1903. Graduate, Illinois State Normal University, 1894, Instructor in Physics and Chemistry, 1894-98. At Stanford, since 1900.

ALBERT LÉON GUÉRARD, Assistant Professor of French.

B. A., Paris, 1898; Agregé de l'Université de France, 1906. Traveling Scholarship in England, 1901-03; Junior Professor of French Literature and Examiner in History, State Normal School, Paris, 1904-06; Instructor in the Romanic Languages, Williams College, 1906-07. At Stanford, since 1907.

EVELYN WIGHT ALLAN, Dean of Women.

B. S., St. Lawrence University, 1891; A. B., Stanford, 1896. Teacher in Montclair (N. J.) High School, 1892-95; Teacher of English, Jersey City High School, 1897-99; Graduate Student at Columbia University, 1907; Teacher of English, Manual Training High School, Brooklyn (N. Y.), 1899-1908. At Stanford, since 1908.

EDWIN CHAPIN STARKS, Assistant Professor of Zoology.

Assistant in United States Bureau of Biological Survey, 1897-99; Curator of the Museum and Assistant Professor of Zoology, University of Washington, 1899-1900. At Stanford, since 1900.

SAMUEL BARCLAY CHARTERS, Jr., Assistant Professor of Electrical Engineering.

M. E., Cornell, 1904. Delegate International Electrical Congress, St. Louis Exposition, 1904; with Westinghouse Electric & Mfg. Company, Pittsburgh (Pa.), 1904-05. At Stanford, since 1905.

EVERETT PARKER LESLEY, Assistant Professor of Mechanical Engineering.

A. B., Stanford, 1897; M. M. E., Cornell, 1905. Apprentice and Foreman in Union Works, San Francisco, 1897-1903. Assistant Inspector to Naval Constructor, 1903-04; Draftsman at U. S. Experimental Model Basin, Washington (D. C.), 1905-07. At Stanford, since 1907.

†ROBERT BARTHOLOW HARSHE, Assistant Professor of Graphic Art.

B. L., Missouri, 1899. Graduate Student, University of Missouri, 1899-1901; Student, Chicago Art Institute, 1901-02; Supervisor Manual Arts, Columbus (Ga.), 1902; Instructor, Summer School of the South, 1903; Manual Training Scholar, Teachers' College, Columbia University, 1903-04; Scholar, Ipswich Summer School, 1904, Art Students' League, 1904-05; Instructor, University of Missouri, 1905-06; Instructor, New York School of Industrial Art, 1906-07; Director, Nantucket Summer School of Design, 1907; Instructor, University of California Summer Session, 1910. At Stanford, since 1907.

GEORGE HOLLAND SABINE, Assistant Professor of Philosophy.

A. B., Cornell, 1905, Ph. D., 1906. Sage Fellow in Philosophy, Cornell University, 1905-06, Assistant in Philosophy, 1906-07; Acting Assistant Professor of Logic and Metaphysics, Cornell University, 1910-11. At Stanford, since 1907.

MARY ISABEL McCRACKEN, Assistant Professor of Bionomics.

A. B., Stanford, 1904, A. M., 1905, Ph. D., 1908. At Stanford, since 1904.

---

†Absent on leave, 1911-12.

RENNIE WILBUR DOANE, Assistant Professor of Entomology.

A. B., Stanford, 1896. Assistant in Zoology and Botany, Washington State College, 1896-99; Assistant Professor of Zoology and Entomology, 1899-1901; Superintendent Fisheries Experiment Station, Keyport, (Wn.), 1901-03. At Stanford, since 1905.

WALTER KENRICK FISHER, Assistant Professor of Zoology.

A. B., Stanford, 1901, A. M., 1903, Ph. D., 1906. Assistant, U. S. Biological Survey, 1897-1901, 1903; Assistant, U. S. Fish Commission, 1902. At Stanford, since 1902.

JOHN PEARCE MITCHELL, Assistant Professor of Chemistry.

A. B., Stanford, 1903, A. M., 1904, Ph. D., 1909. Student, University of Leipzig, 1904-05. At Stanford, 1903-04, and since 1905.

LEONAS LANCELOT BURLINGAME, Assistant Professor of Botany.

Ph. B., Ohio Northern University, 1901; A. B., Chicago, 1906, Ph. D., 1908. Instructor in Biology, Ohio Northern University, 1901-04; Fellow in Botany, University of Chicago, 1906, Assistant, 1906-08. At Stanford, since 1908.

ROYCE REED LONG, Director of Physical Training.

A. B., Stanford, 1908. Physical Director, Young Men's Christian Association, Dixon (Ill.), 1897-98, Aurora (Ill.), 1889-1900; Assistant in Encina Gymnasium, 1902-04; Director of Vanderbilt University Gymnasium, 1904-06. At Stanford, since 1906.

ERNEST WILLIAM PONZER, Assistant Professor of Applied Mathematics.

B. S., Illinois, 1900, M. S., 1903. Instructor in Mathematics, University of Illinois, 1900-09. At Stanford, since 1909.

FRANK ELLSWORTH BLAISDELL, Assistant Professor of Applied Anatomy.

M. D., Cooper Medical College, 1889. Demonstrator of Anatomy, Cooper Medical College, 1903, Instructor in Biology and Embryology, 1900-09, in Histology, 1907-09, Assistant Professor of Anatomy, 1904-05, Associate Professor, since 1907. At Stanford, since 1910.

ERNEST CHARLES DICKSON, Assistant Professor of Pathology.

A. B., Toronto, 1904, M. B., 1906. Assistant Demonstrator in Physiology, including Physiological Chemistry and Pharmacology, University of Toronto, 1904-05, George Brown Research Scholar, 1906-07; Interne, Toronto General Hospital, 1907, Assistant Demonstrator in Pathology, in charge of Clinical Laboratory, 1907; Assistant Resident Physician, Johns Hopkins Hospital, 1907-08; Instructor in Pathology and Bacteriology, Cooper Medical College, since 1908. At Stanford, since January, 1911.

AURELIO MACEDONIO ESPINOSA, Assistant Professor of Spanish.

A. B., Colorado, 1902, A. M., 1904; Ph. D., Chicago, 1909. Assistant in Romance Languages, University of Colorado, 1901-02; Instructor in Spanish, Summer Term, 1904, 1905; Professor of Romance Languages, University of New Mexico, 1902-10; Fellow in Romance Languages and Instructor in Spanish, University of Chicago, 1908-09; Membre fondateur et callabrateur special de la Société International de Dialectologie Romane, 1909; Membro correspondiente de la Sociedad de Folklore chileno, 1910. At Stanford, since 1910.

BRUNO BOEZINGER, Assistant Professor of German.

A. B., Fort Worth University, 1894, A. M., 1895; Ph. D., Stanford, 1910. Instructor in German, North Texas Normal School, 1895-98; Principal, German Department, San Antonio (Texas) H. S., 1899-1906; Instructor in German, Summer School, University of Texas, 1896. At Stanford, since 1906.

EDGAR EUGENE ROBINSON, Assistant Professor of History.

A. B., Wisconsin, 1908, A. M., 1910. Assistant in History, University of Wisconsin, 1908-09, Fellow in American History, 1909-10; Assistant Professor of History, Carleton College, 1910-11. At Stanford, since 1911.

CLELIA DUEL MOSHER, Director of Roble Gymnasium.

A. B., Stanford, 1893, A. M., 1894; M. D., Johns Hopkins, 1900. Assistant in Hygiene and Physical Training, Stanford, 1893-94, Instructor, 1894-96; Externe in the Johns Hopkins Hospital Dispensary, and Gynecological Assistant in Dr. Kelly's Sanatorium, Baltimore (Md.), 1900-01; Physician, Palo Alto, 1901-10. At Stanford, 1893-96, and since 1910.

THOMAS ADDIS, Assistant Professor of Medicine.

M. B. Ch. B., Edinburgh, 1905, M. D. and M. R. C. P., 1908. Clinical Assistant Medical Out Patient Department, Royal Infirmary of Edinburgh, 1908, 1911; Medical Registrar, Leith Hospital, 1911; Carnegie Research Scholar and Fellow, 1908-11; Member of the Royal Medical Society; Member of the Pathological Club, Edinburgh; Director of the Clinical Laboratory, Lane Hospital, since 1911. At Stanford, since 1911.

CHARLES NORMAN CROSS, Assistant Professor of Mechanical Engineering.

M. E., Cornell, 1906. Assistant Engineer, Long Island State Hospital, Brooklyn (N. Y.), 1905; Dynamo and Switchboard Attendant with the New York Edison Co., New York City, 1905-06; Electrician with the Lackawanna Steel Co., Buffalo (N. Y.), 1906. At Stanford, since 1906.

IRA BROWN CROSS, Assistant Professor of Economics.

A. B., Wisconsin, 1905, A. M., 1906; Ph. D., Stanford, 1909. University Scholar in Economics, University of Wisconsin, 1905-06; Special Agent for Wisconsin Tax Commission, 1904-06; Special Agent for U. S. Immigration Commission, 1908-09. At Stanford, since 1906.

JOHN HARRISON FOSS, Assistant Professor of Civil Engineering.

A. B., Stanford, 1903. Assistant Engineer, Hamakua Ditch, Huelo, Maui (Hawaiian Islands), 1903-04, Engineer, 1904-05; Engineer, Maui Agricultural Co., Paia, Maui, 1905-07. At Stanford, since 1907.

HERMANN JOHANN HILMER, Assistant Professor of German.

A. B., Michigan, 1904; A. M., Columbia, 1905. Assistant in German, University of Wisconsin, 1905-06; Student, University of Leipzig, 1906-07. At Stanford, since 1907.

JESSE BRUNDAGE SEARS, Assistant Professor of Education.

A. B., Stanford, 1909. Instructor in Education, University of Wisconsin, 1909-10; Student, Teachers' College, Columbia University, 1910-11. At Stanford, since 1911.

EVERETT WALLACE SMITH, Assistant Professor of English.

A. B., Stanford, 1899. At Stanford, since 1910.

PERCY ALVIN MARTIN, Assistant Professor European History.

A. B., Stanford, 1902, A. M., 1903; A. M., Harvard, 1907. Student, University of Paris, 1903-04, Universities of Berlin and Leipzig, 1907-08; Fellow, Harvard University, 1908; Professor of History and French, Whittier College, 1904-05. At Stanford, since 1908.

GEORGE WILLIAM HAUSCHILD, Acting Assistant Professor of German.

A. B., Northwestern College (Wisconsin), 1900. Graduate Student, Columbia, 1901-02, Leipzig, 1902-03, Harvard, 1905-06; Fellow in German, University of Chicago, 1908-09; Professor of Modern Languages, Newberry College (S. C.), 1906-07; Instructor in German, State University of Iowa, 1907-08, School of Education, University of Chicago, 1908-09, University of Washington, 1909-11; Assistant Professor of German, in charge, University of Oregon, Summer, 1911. At Stanford, since 1911.

SUSAN BROWN BRISTOL, Appointment Secretary.

A. B., Stanford, 1897. At Stanford, since 1900.

EDWARD JOHN STANLEY, Instructor in Pattern Making.

Machinist with Pacific Iron Works, San Francisco, 1879, Blacksmith, 1880, Draughtsman, 1881, Pattern Maker, 1883-86; Third Assistant Engineer, Steamer Alabama, 1882; Foreman Pattern Maker, Union Iron Works, San Francisco, 1886-1901, 1906. At Stanford, since 1901.

JAMES BENNETT LIGGETT, Instructor in Foundry Practice.

Apprentice and Foundry Moulder, Falls Rivet and Machine Co., Cuyahoga Falls (Ohio), 1883-88, Webster, Camp & Lane, Akron (Ohio), 1888-93, Bowler & Co., Cleveland (Ohio), 1893-98, Cleveland Steel Casting Co., 1898-99; Foreman, Born Steel Range Co., Cleveland (Ohio), 1899-1902, Westinghouse Electric Co., Cleveland (Ohio), 1902. At Stanford, since 1902.

CHLOE LESLEY STARKS, Instructor in Graphic Art.

At Stanford, since 1899.

THERON J. PALMATEER, Instructor in Machine Shop Practice.

Apprentice with Sibley & Ware, South Bend (Ind.); Journeyman Machinist, 1896-1905, with R. Hoe & Co., New York, Columbus Machine Works, Columbus, O., Elems Engineering Works, Chicago, Western Gas Engine Works, Mishawaka, Ind., Webster Iron Works, Bakersfield, Cal., R. S. Hunkins, San Jose, Cal. At Stanford, since 1904.

LAWRENCE EDMINSTER CUTTER, Instructor in Mechanical Engineering.

A. B., Stanford, 1906. Machinist Apprentice and Journeyman, Union Iron Works, San Francisco, 1895-99, 1899-1902, 1903, 1904, Draftsman, 1905, 1906. At Stanford, since 1906.

WILLIAM HENRY SLOAN, Instructor in Chemistry.

A. B., Stanford, 1903, A. M., 1904. Student, University of Leipzig, 1904-05; Assistant Chemist, San Francisco Board of Health, 1905-06. At Stanford, 1903-04, and since 1906.

THERESA PEET RUSSELL, Instructor in English.

Ph. B., Iowa, 1895. Teacher in Denison Normal School, 1895-96; Principal, Vilisca High School, 1896-98; Graduate Student at Radcliffe College, 1898-99; Teacher in Anamosa High School, 1899-1900. At Stanford, since 1905.

ROBERT HENRY HARCOURT, Instructor in Forge Practice.

Blacksmith with Risdon Iron Works, San Francisco, 1898-1901, 1903-04; with Hammond Car and Elevator Company, San Francisco, 1901-02, 1904-05; with National Iron Works, San Francisco, 1902-03; with Abner Doble Steel Company, San Francisco, 1905-06, Foreman of Forge Shop, 1906-07. At Stanford, since 1907.

CHARLES MOSER, Instructor in Civil Engineering.

C. E., Ohio Northern University, 1902; A. B., Stanford, 1908. At Stanford, since 1908.

ALMON EDWARD ROTH, Student Adviser.

A. B., Stanford, 1909. At Stanford, since 1909.

HENRY WILFRED MALONEY, Instructor in Physical Training.

Graduate, Army Gymnastic School, Curragh, Ireland, 1899. Sergeant-Instructor in Gymnastics and Fencing, British Army, 1899-1903; Conductor of Private Gymnasium, Pasadena (Cal.), 1904-08. At Stanford, since 1908.

PHILIP ARNOLD KNOWLTON, Instructor in Latin.

A. B., Wisconsin, 1906, A. M., 1908. Graduate Scholar in Greek, University of Wisconsin, 1906-07, in Philosophy, 1907-08; Teacher of Latin and English, Chico (Cal.) H. S., 1908-09. At Stanford, since 1909.

PERLEY ASON ROSS, Instructor in Physics.

A. B., Stanford, 1908, A. M., 1910, Ph. D., 1911. At Stanford, since 1908.

EDITH RONALD MIRRIELEES, Instructor in English.

A. B., Stanford, 1907. At Stanford, since 1909.

FRANK WALTER WEYMOUTH, Instructor in Physiology.

A. B., Stanford, 1909, A. M., 1911. At Stanford, since 1910.

GEORGE SHAMBAUGH BOHART, Instructor in Chemistry.

A. B., Stanford, 1911.

HARRY JOHNSON SEARS, Instructor in Chemistry.

A. B., Stanford, 1911.

HENRY VARNUM POOR, Instructor in Drawing.

A. B., Stanford, 1910. At Stanford, since 1911.

ROBERT EDOUARD PELLISSIER, Instructor in Romanic Languages.

B. S., Harvard, 1904, A. M., 1909. Instructor in Romanic Languages, Stanford, 1909-10; Shattuck Scholar in Romance Languages, Harvard University, 1910-11.

JOHN ANDREW KOONTZ, Jr., Instructor in Electrical Engineering.

A. B., Stanford, 1908. With Northern California Power Co. 1908-09; with General Electric Co., Schenectady (N. Y.), and Pittsfield (Mass.), 1910-11.

AXEL NIELSEN, Instructor in Electrical Engineering.

Graduate Darmstadt Technische Hochschule, 1906. With Testing Department, Westinghouse Newark Works, 1907; with Operating Department, Niagara, Lockport and Ontario Power Co., 1907-09; with Engineering Department, Westinghouse Electric Co., East Pittsburg, 1909-11.

†HARRY HARMON BLEE, Instructor in Mechanical Engineering.

A. B., Stanford, 1910, M. E., 1911.

†Resigned December, 1911.

VAN WYCK BROOKS, Instructor in English.
A. B., Harvard, 1907. At Stanford, since 1911.

JAMES EAVES, Instructor in Surgery.
M. B. Ch. B., Edinburgh, 1909.

HAYES WILSON YOUNG, Instructor in Metallurgy.
A. B., Stanford, 1911. At Stanford, since 1911.

JAMES IRA WILSON McMURPHY, Instructor in Systematic Botany.
A. B., Stanford, 1908, A. M., 1909. At Stanford, since 1908.

DONALD FREDERICK GRASS, Instructor in Economics.
A. B., Harvard, 1889; A. M., 1899.

‡KARL LUDWIG SCHAUPP, Student Adviser.

EUGENE CRITTENDEN TEMPLETON, Acting Instructor in Geology.
A. B., Stanford, 1910.

PAUL HERMAN WALDRAFF, Acting Instructor in Chemistry.
A. B., Stanford, 1910, Chem. E., 1911.

ALICE RUTH BERGER, Acting Instructor in Chemistry.
A. B., Stanford, 1908.

ELIZABETH LEE BUCKINGHAM, Acting Instructor in English.
A. B., Stanford, 1910.

EUGENE GARRISON McCANN, Acting Instructor in Electrical Engineering.
A. B., Stanford, 1911.

MAX LIPPITT LARKIN, Acting Instructor in Economics.
Ph. M., University of Chicago, 1910. Fellow of Economics, University of Chicago, 1909-10.

CLARENCE P. CAMPBELL, Acting Instructor in Mechanical Engineering.

†EMANUEL CHARLES FLEISCHNER, Clinical Instructor in Medicine, subdivision of Pediatrics.
M. D., Yale, 1904; Past Resident Physician, New Haven Hospital, 1905; Nursery and Children's Hospital, 1906; Volunteer Assistant to the Knopfelmacher Klinik, Vienna, 1907; Instructor in Pediatrics, Cooper Medical College, 1909-11. At Stanford, since 1912.

†WALTER WHITNEY BOARDMAN, Clinical Instructor in Medicine, Medical Clinic.
M. D., Cooper Medical College, 1909. Clinical Instructor in Medicine, University of California, 1906; Assistant in Phipps Dispensary, Johns Hopkins Hospital, 1910, Assistant in Actinography and Externe in Gynecology, 1911; Director of Actinography, Lane Hospital, 1912. At Stanford, since 1912.

‡MORTON RAYMOND GIBBONS, Clinical Instructor in Medicine, subdivision of Pediatrics.
A. B., University of California, 1891; M. D., Cooper Medical College, 1894. Instructor in Clinical Medicine, Cooper Medical College, 1904-09; Student, London and Vienna, 1910.

†Beginning January, 1912.
‡Beginning August, 1912.

LECTURERS

LUTHER BURBANK, Lecturer on Plant Evolution.

MORRIS ELMER DAILEY, Lecturer in Education.

A. M., Indiana, 1897; LL. D., Drake, 1901. Superintendent of City Schools, Fresno (Cal.), 1897-99; Vice-President and Teacher of History, San Jose State Normal School, 1899-1900, President since 1900.

SAMUEL WILSON CHARLES, Lecturer in Law.

A. B., Stanford, 1898.

HAR DAYAL, Lecturer on Indian Philosophy.

B. A., Punjab University, 1903, M. A., 1904. Aitchison-Ramrattan Sanskrit Scholar, 1903-05; Lecturer in History and Economics, St. Stephen's College, Delhi, 1905; Government of India Scholar at Oxford (History and Economics), 1905-07; Boden Sanskrit Scholar, Oxford, 1907; Casberd Exhibitioner in History, St. John's College, Oxford, 1907.

ASSISTANTS

[[1]First semester; [2]second semester.]

Greek

BLANCH RIBLE.

A. B., Stanford, 1910, A. M., 1911.

DOROTHY ELIZABETH SINGER.

A. B., Nevada, 1909, A. M., 1910.

Latin

[2]RUTH WENTWORTH BROWN.

A. B., Stanford, 1904. Teacher of Latin and German, Alhambra H. S., 1904-05; Student, Universities of Berlin and Jena, 1905-06; Assistant Professor of Latin and German, University of Southern California, 1906-09, Associate Professor, since 1909.

[2]EDITH FLORENCE GRUNDY.

A. B., Stanford, 1911.

Germanic Languages

NETTA HAFFNER HILMER.

B. S., Michigan, 1895; A. M., Wisconsin, 1906. Assistant Principal H. S., Seymour, Wis., 1895-96; Instructor in Chemistry, Mt. Holyoke College, 1896-98; Student, University of Leipzig, 1899-1900; Principal H. S., Sturgis, Mich., 1900-04; Graduate Student, University of Wisconsin, 1904-06; Teacher of German, Wisconsin Academy, Madison, Wis., 1904-05; W. F. Allen Scholar in Germanic Philology, University of Wisconsin, 1905-06.

Romanic Languages

HELEN BRADLEY.

GEORGE LOUIS LAWRENCE.

BENJAMIN FRANKLIN LUKER.
A. B., Washington and Lee, 1909, A. M., 1910.

JEANNE ROSE ROUILLER.

English

GLADYS WOLCOTT BARNES.
A. B., Stanford, 1911.

PAUL JAY BATKIN.
A. B., Stanford, 1910.

BRUCE ORMSBY BLIVEN.
A. B., Stanford, 1911.

[2]CLARENCE BRAY HAMMOND.

AGNES C. RAMSEY, Mimeographer (in English, Education, and Romanic Languages).

RUSSELL OSBORNE STIDSTON.
A. B., Stanford, 1911.

Philosophy

FRANKLIN FOWLER WOLFF.
A. B., Stanford, 1911.

Psychology

JOHN EDGAR COOVER.
A. B., Stanford, 1904, A. M., 1905.

Education

FRANCES ELIZABETH SHORT.
A. B., Stanford, 1902.

[2]WILFORD EBENEZER TALBERT.

History

ELLA WISSIE BEAVER.
A. B., Stanford, 1912.

LINDA MAY BELL.
A. B., Stanford, 1911.

CLAYTON DOUGLASS CARUS, International Conciliation.

ROY FRANCIS HOWES.
A. B., Clark, 1910.

SARAH D. KIRBY, Stenographer.

THOMAS POWDERLY MARTIN.

[2]CAROLINE BEATRICE SCULL, International Conciliation.
A. B., Stanford, 1912.

MARJORY SEELEY.
A. B., Stanford, 1911.

Economics

[2]RALPH G. COLE.

WILLIAM EDWARD COX.
A. B., Texas, 1909, A. M., 1910.

CLARENCE EDWIN FLEMING.

FRANK MARION RUSSELL, Mimeographer.

Law

ARTHUR FREDERIC COE, Stenographer.
A. B., Stanford, 1909.

GEORGE JUAN HATFIELD, Law Library.
A. B., Stanford, 1911.

HANS CHRISTIAN NELSON, Law Library.
A. B., Stanford, 1910.

WILLIAM HERBERT PATTERSON, Law Library.
A. B., Stanford, 1910.

IGNATIUS MARTIN PECKHAM, Law Library.
A. B., Stanford, 1911.

CLYDE CLARENCE SHOEMAKER, Law Library
A. B., Stanford, 1910.

WALTER SLACK, Law Library.
A. B., Stanford, 1909.

FREDERICK BERTRAM WOOD, Law Library.
A. B., Stanford, 1910.

Graphic Art

GLADYS WILLAMARY CLARK.
A. B., Stanford, 1911.

Mathematics

MARY VIRGINIA STUART.
A. B., Stanford, 1911.

Applied Mathematics

JOHN WATSON FLEMING ARMSTRONG.
[2]ARTHUR GARRETT ATKINSON.
MURRAY CHASE AYRES.
EDWIN PRESCOTT BLY.
RUTHERFORD ERWIN GLEASON.
ROMNEY LEIGH VAUGHN.

Physics

HARRY CARLETON BURBRIDGE.
A. B., Stanford, 1908.

SHIRLEY HYATT.
A. B., Stanford, 1906, A. M., 1908.

GEORGE WILBUR MOFFITT.
A. B., University of Iowa, 1910.

EULALIA RICHARDSON.
A. B., Stanford, 1910, A. M., 1911.

MORRIS WENK, Technical Assistant.

Chemistry

[1]THOMAS MEREDITH CRAMER.
A. B., Stanford, 1911.

[2]ROBERT JOHN CROSS.
A. B., Stanford, 1911.

ELMER R. EWELL, Custodian of Laboratory.

CHARLES MERRILL FULKERSON.
A. B., Stanford, 1911.

WIN RAWDON GODDARD.

BEN MERRILL HAWES.

JOHN STEPHEN HORN.
B. S., Nevada, 1911.

[1]ELOISE JAMESON.
A. B., Stanford, 1910.

[1]ROBERT ALTON JONES.
A. B., Stanford, 1908.

WILLIAM NOBLE LACEY.
A. B., Stanford, 1911.

CHARLES KIRKTON McWILLIAMS.

HELEN NAGEL.
A. B., Stanford, 1911.

[1]RALPH CARLETON POLLOCK.
A. B., Stanford, 1906.

THOMAS BENJAMIN SCOTT, Storekeeper.

Botany

HALLY DELILIA MARY JOLIVETTE.
A. B., University of Wisconsin, 1906, A. M., 1909.

JOSEPHINE LOUISE DOWS RANDALL.
A. B., Stanford, 1909.

[2]FRANK JASON SMILEY.

Physiology and Histology

ROSCAL LEROY DRAPER.

KARL LUDWIG SCHAUPP.

ESTHER MAY SKOLFIELD.
A. B., Stanford, 1912.

HOWARD FRANK WEST.

Anatomy

RUSSELL PAINE, Technical Assistant.
A. B., Stanford, 1911.

Bacteriology

ARTHUR RICHARD MEINHART.

[1]GEORGINA BRACKENRIDGE SPOONER.
A. B., Vassar, 1907; A. M., Columbia, 1908.

[1]EDWARD GUILFORD CARY.

[2]CLYDE T. WETMORE.

Pharmacology

BERTRAM AUGUST RISLING.

JAMES PORTER CRAWFORD.

Physical Training

JAMES PORTER CRAWFORD.

KENNETH LLEWELLYN DOLE.

CHARLES MERRILL FULKERSON.
A. B., Stanford, 1911.

FRANK HOWARD HILTON.
A. B., Stanford, 1911.

GEORGE STEVENSON HOLEMAN.

ERNESTO RAY KNOLLIN.

FRANK LEONARD STILLSON, Custodian Encina Gymnasium.

CLYDE T. WETMORE.

MAUDE CLEVELAND.
B. L., California, 1909. Assistant Dean of Women, University of California, 1909-10; Superintendent of Playgrounds, San Diego, 1910.

MAUD L'ANPHERE CROOK.

EDNA GRACE DAVIS.
A. B., Stanford, 1909.

[2]MARY HOLBROOK, Matron Roble Gymnasium.

[1]CLARA L'ANPHERE, Matron Roble Gymnasium.

ETHEL OWEN.

Zoology

WILLIAM FRANCES THOMPSON.
A. B., Stanford, 1911.

Entomology and Bionomics

MAY KNIGHT BELL.

[1]DAVID LIVINGSTON CRAWFORD.

CHARLES WILLIAM METZ, Bionomics.
B. S., Pomona, 1911.

[1]ERVAL JACKSON NEWCOMER.
A. B., Stanford, 1911.

[2]HAROLD MORRISON.

[2]FRANKIE WILLARD.
A. B., Stanford, 1911.

[2]LEONA ZOE BEAL.

Geology and Mining

[2]CARL HUGH BEAL, Curator of Collections.

[2]ELWIN JAMES BOUNDEY, Mineralogy.
A. B., Stanford, 1911.

SADIE KEEN, Stenographer.

[2]GROVER BERNER LANTZ, Metallurgy.

[1]HORATIO LEVERETT SMALL.
A. B., Stanford, 1911.

Civil Engineering

MURRAY CHASE AYRES.
CARROLL DOYLE BALL.
CHARLES NEWMAN BLOOD.
ROBERT FRANCIS DURYEA.
HERMAN ENDRES.
NORMAN MARSHALL HALCOMBE.
HARRY LEWIS McCREADY.
ARTHUR CHARLES SANDSTROM.
SIDNEY BURTON SHAW.
ARTHUR TAYLOR.
ROMNEY LEIGH VAUGHN.

Mechanical Engineering

FRANK DANIEL BANHAM, Foreman Mechanician Shop.
ALEXANDER GRON BUDGE.

WILLIAM BOOMER FORBES, Stenographer.
HARLEY C. GREGG, Machinist Helper.
MYRTIL COLE HAVENS, Mechanician.
WILLIAM CLEMONS HORN, Custodian of Shops.
CHAUNCEY TENNENT KEEFER.
JOHN LYNN REYNOLDS.
[2]CRIGHTON WELCH SCHOLEFIELD.
WALTER UHLMAN, Engineer.

Electrical Engineering

FRANK E. CORBALEY, Laboratory Attendant.

Medicine

[2]HOWARD FELIX ADLER.

B. S., California, 1904; M. D., Harvard, 1908. German Hospital, New York City, 1908-11.

WALTER CLEMENT ALVAREZ.

M. D., Cooper Medical College, 1905. Interne, City and County Hospital, San Francisco, 1905-06; Assistant in Clinical Pathology, Cooper Medical College, 1906-07.

[1]M. L. ARKIN, Pathology.

WILLIAM HENRY BANKS.

M. D., Cooper Medical College, 1904. Interne in Lane Hospital, 1904-05; Assistant in Medicine, Cooper Medical Dispensary, 1909-11.

WILLIAM REDWOOD PRICE CLARK.

M. D., Cooper Medical College, 1899. House Physician, St. Luke's Hospital, 1900; Assistant Visiting Physician, City and County Hospital, San Francisco, 1901-04; Instructor in Medicine, Cooper Medical College, 1905-11; Visiting Physician, Clinic of the San Francisco Association for the Study and Prevention of Tuberculosis, 1909-12; Visiting Physician, City and County Tuberculosis Hospital, San Francisco, 1911-12.

GERTRUDE ANNIE DALEY, Pathology.

Student, General Laboratory Work, San Francisco Polyclinic 1909, Assistant in Clinical Laboratory, since 1910; Technical Assistant, Pathological Department of Cooper Medical College, since 1910.

†FLORENCE MABEL HOLSCLAW, Pediatrics.

A. B., Stanford, 1894; M. D., Cooper Medical College, 1897; Interne, City and County Hospital, San Francisco, 1898-99; Interne, Lane Hospital, 1899-1900; Assistant in Pediatrics, Cooper Medical College, 1900-11; Student in Vienna and London, 1910.

[2]CLARENCE E. HYDE.

A. B., Stanford, 1905; M. D., Columbia, 1907. Interne and House Physician, Post Graduate Hospital, New York, 1910-12.

PETER HARRISON LUTTRELL.

M. D., Cooper Medical College, 1908. Assistant in Medical Clinic, Cooper Medical College, 1908-10; Instructor in Physical Diagnosis, Cooper Medical College, 1910-11; Assistant in Medical Wards, Lane Hospital, since 1911.

---

†Beginning August, 1912.

GEORGE DUNLAP LYMAN.

A. B., Stanford, 1905; M. D., Columbia, 1909. Interne and House Physician, Bellevue Hospital, N w York, 1909-11.

†LEWIS DURANT MEAD, Pediatrics.

B. S., California, 1898; A. M. and M. D., Columbia, 1902.

NARCISSA McJUNKIN.

†ROY H. MORRIS, Pediatrics.

M. D., Cooper Medical College, 1905.

WALTER FRANK SCHALLER.

M. D., Cooper Medical College, 1902. Interne, German Hospital, San Francisco, 1902-03; Assistant, San Francisco Polyclinic, 1903-05; Assistant in Pathology, Cooper Medical College, 1905-06; Assistant Surgeon, U. S. N., 1906-08.

ISAAC WALTON THORNE, Surgery.

M. D., Cooper Medical College, 1896. Instructor in Surgery, Cooper Medical College, 1898-1906; Assistant Visiting Surgeon to City and County Hospital, for Cooper Medical College, 1906-10; Assistant Professor of Surgery, Cooper Medical College, 1910-12; Surgeon, Mary's Help Hospital, 1912.

WALTER HOEPFNER WINTERBERG, Surgery.

M. D., Cooper Medical College, 1895. Student, University of California, 1890-91; Acting Assistant Surgeon, U. S. A., 1898-1900; Captain and Assistant Surgeon, U. S. V., 1901-02; Assistant in Surgery, Cooper Medical College, 1903-07; Instructor, 1908-10.

†HENRY HERBERT YERINGTON, Medicine.

M. D., College of Physicians and Surgeons, New York, 1908.

Music

HELEN WISHARD.

President's Office

MARJORIE EDWARDS.

A. B., Minnesota, 1908.

[2]EMIL FREDERIC HOLLMAN, Stenographer.

A. B., Stanford, 1911.

KENNETH MAYER.

CARL JOSEPH PARK, Lantern Operator.

FRANK ALSON SCOFIELD, Mimeographer.

LEONA ESTHER STAPLETON, Stenographer.

Registrar's Office

[2]FREDERICK HAROLD BEACH.

MARGARET A. POST.

MINNA STILLMAN.

A. B., Stanford, 1903.

Committee on Public Health

HELEN CAMPBELL, Secretary.

†Beginning August, 1912.

UNIVERSITY LIBRARY

Staff

†JOHN EDWARD GOODWIN, Assistant Librarian.
A. B., Wisconsin, 1901; B. L. S., New York State Library School, 1905. Classifier and Cataloguer, Madison (Wis.) Free Library, 1901-04; Assistant, Legislative Reference Department, Wisconsin Free Library Commission, 1903.

HELEN BINNINGER SUTLIFF, Chief Cataloguer.
A. B., Kansas, 1890. Head Cataloguer, University of Kansas Library, 1891-1905; Cataloguer in Columbia University Library, Summer, 1901.

ALICE NEWMAN HAYS, Classifier.
A. B., Stanford, 1896; B. L. S., New York State Library School, 1903. Assistant, Home Education Department, New York State Library, 1901.

FRANCES SOPHIA COURTENAY JAMES, Medical Librarian.
A. B., Wisconsin, 1904, A. M., 1905. Graduate Student, University of Wisconsin, 1905-07; Cataloguer, Wisconsin Historical Library, 1901-07, University of Washington, 1907-08.

MAIDA ROSSITER, Reference Librarian.
A. B., Cornell, 1903.

CHARLES V. PARK, Chief of Loan Desk.
A. B., Stanford, 1909.

MAY FRANKLIN, Chief of Order Department.
A. B., Stanford, 1907.

LUCIA MAY BROOKS, Supervisor Serial Department.
Cataloguer, University of Minnesota Library, 1905-09.

Assistants

LUCRETIA BOULWARE, Order Department.
A. B., Stanford, 1904.

AGNES ELIZABETH BROWN, Assistant at Loan Desk.
A. B., Stanford, 1906.

MARGUERITE BROWN.

JOSEPH PAUL COTTRELL.

THOMAS LAFAYETTE DYER.

ELIZABETH HADDEN, Cataloguer.

ANNA GERTRUDE HALL, Cataloguer.
A. B., Stanford, 1906.

HARRIET HAYES.
A. B., Stanford, 1912.

[2]JEAN MARCUS, Lane Library.

JEANNETTE CATHERINE MORGAN, Cataloguer.
A. B., Stanford, 1909.

---

†Resigned December, 1911.

OLLIS WILLARD NEWMAN.

LOUISE OPHÜLS, Lane Library.

WALTER SLACK.
A. B., Stanford, 1909; J. D., 1911.

MARY ELVIRA SMITH, Assistant Classifier.
Ph., Ottawa University, 1905.

TALMADGE LAUGHNER SMITH.

[1]SYLVIA DELLA STINSON.

NINA STRACHAN, Reference Assistant.

LEROY EDWARD TAYLOR.

DELLA THOMPSON, Cataloguer.
A. B., Stanford, 1909.

HANNAH LILLIAN TODD.

LAURA AGNES WILLIAMSON, Cataloguer.
A. B., University of California, 1909.

MARY JEANNETTE WOODRUFF, Stenographer.

MEMORIAL CHURCH

GODFREY CARL BUEHRER, Organist.
A. M., Rensselaer College (Indiana), 1896; Mus. Doc. Hon., Santa Clara College, 1907. Student Scola Cantorum, Paris, 1904-06; Instructor of Band, Orchestra, and Choir, Rensselaer College, 1892-96; Instructor, St. Joseph's College, San Jose, 1897-98; Organist, St. Joseph's Church, San Jose, 1899-1908; Professor of Music, Santa Clara College, 1901-05.

LELAND STANFORD JUNIOR MUSEUM

HARRY C. PETERSON, Curator.
Charter Member American Museum Association.

ENCINA HALL

LESTER DOUGLAS SUMMERFIELD, Chairman of Committee.

ROBLE HALL

MRS. ELLA ROLKER, Matron.

ORGANIZATION

Foundation

The Leland Stanford Junior University was established under an Act of the Legislature, approved March 9, 1885, entitled "An Act to advance learning, the arts and sciences, and to promote the public welfare by providing for the conveyance, holding, and protection of property, and the creation of trusts for the founding, endowment, erection, and maintenance within this State of universities, colleges, schools, seminaries of learning, mechanical institutes, museums, and galleries of art." The Founding Grant, executed November 11, 1885, was made public at a meeting of the Board of Trustees, held in San Francisco, November 14, 1885. The cornerstone of the inner quadrangle was laid May 14, 1887, and the institution opened to students October 1, 1891.

Nature, Object, and Purposes of the University

"We, Leland Stanford and Jane Lathrop Stanford, husband and wife, grantors, desiring to promote the public welfare by founding, endowing, and having maintained upon our estate known as the Palo Alto Farm, and situated in the Counties of San Mateo and Santa Clara, State of California, United States of America, a university for both sexes, with the colleges, schools, seminaries of learning, mechanical institutes, museums, galleries of art, and all other things necessary and appropriate to a university of high degree, to that end, and for that purpose, do hereby grant," etc.

"And that the trust hereby created may be executed according to the wishes of the grantors and each of them, they do hereby designate the Nature, Object, and Purposes of the Institution hereby founded, to be:

"Its nature, that of a University, with such seminaries of learning as shall make it of the highest grade, including mechanical institutes, museums, galleries of art, laboratories, and conservatories, together with all things necessary for the study of agriculture in all its branches, and for mechanical training, and the studies and exercises directed to the cultivation and enlargement of the mind;

"Its object, to qualify students for personal success and direct usefulness in life;

"And its purposes, to promote the public welfare by exercising an influence in behalf of humanity and civilization, teaching the blessings of liberty regulated by law, and inculcating love and reverence for the great principles of government as derived from the inalienable rights of man to life, liberty, and the pursuit of happiness."

Name of the University

"Since the idea of establishing an institution of this kind, for the benefit of mankind, came directly and largely from our son and only child, Leland, and in the behalf that had he been spared to advise as to the disposition of our estate, he would have desired the devotion of a large portion thereof to this purpose, we will that for all time to come the institution hereby founded shall bear his name, and shall be known as The Leland Stanford Junior University."

Management and Control of the University

The general management and control of the institution is vested in a Board of Trustees originally numbering twenty-four, and chosen for life. By the Amending Act of May 31, 1899, the number of trustees is reduced to fifteen, with future elections for a term of ten years. The Board of Trustees fills all vacancies.

Powers and Duties of the Trustees

"The Trustees shall have power and it shall be their duty:

"To appoint a President of the University, who shall not be one of their number, and to remove him at will.

"To fix the salaries of the President, Professors, and Teachers, and to fix them at such rates as will secure to the University the services of men of the very highest attainments.

"To establish and maintain at such University an educational system which will, if followed, fit the graduate for some useful pursuit, and to this end to cause the pupils, as early as may be, to declare the particular calling which in life they may desire to pursue. . . .

"To prohibit sectarian instruction, but to have taught in the University the immortality of the soul, the existence of an all-wise and benevolent Creator, and that obedience to His laws is the highest duty of man.

"To have taught in the University the right and advantages of association and coöperation.

"To afford equal facilities and give equal advantages in the University to both sexes.

"To maintain on the Palo Alto estate a farm for instruction in agriculture in all its branches.

"The Board of Trustees shall annually report all their proceedings to the person who for the time being shall fill the office of Governor of the State of California, and shall accompany such report with a full account of their financial operations for the preceding year, and with a statement of the financial affairs of the institution."

Powers and Duties of the President

"It shall be the duty of the Trustees to give to the President of the University the following powers:

"To prescribe the duties of the professors and teachers; to remove professors and teachers at will; to prescribe and enforce the course of study and the mode and manner of teaching; such other powers as will enable him to control the educational part of the University to such an extent that he may justly be held responsible for the course of study therein and for the good conduct and capacity of the professors and teachers."

Amendments to the Founding Grant

A clause in the Founding Grant reserved to the grantors the right to alter, amend, or modify the terms and conditions of the grant in important particulars. Under this provision amendments were made by Mrs. Stanford, June 1, 1897; May 31, 1899; March 28, 1902; October 3, 1902; June 1, 1903. These amendments were concerned mainly with matters of detail, but provided also "that the number of women attending the University as students shall at no time ever exceed five hundred."

An Amendment to the Constitution of the State of California, adopted November 6, 1900, "permitted, approved, and confirmed all the trusts, estates, terms, and conditions" of the Founding Grant and of all the deeds, conveyances, and other instruments made and delivered before that date, and authorized the Legislature, under certain conditions, to exempt the property of the University from taxation.

The University Faculty

"The Trustees shall constitute the President and professors the faculty of the University, and shall prescribe their powers and duties as such."

Under the Articles of Organization, adopted by the Board of Trustees March 31, 1904, the power and authority of the University Faculty is vested in the Academic Council, consisting of the President of the University, the professors and associate professors, the librarian, the registrar, such assistant professors as have been upon the roll of the faculty for three years, whether as assistant-professors or instructors, and such other officers of the University or members of the teaching staff as the Academic Council may, with the assent of the Board of Trustees, determine.

All general University regulations, statutes, and rules as to matters within the province of the faculty, must be initiated in and passed by the Academic Council. The Academic Council has general power and responsibility for the internal administration of the University, subject to express provisions contained in the Articles of Organization respecting the methods of exercising such powers through the President of the University, the Advisory Board, the Standing Committees, and the Department Faculties.

The Advisory Board consists of nine members of the rank of professor, one from each of the five department groups, and four chosen without reference to groups. All executive acts of general importance, such as recommendations for appointments, promotions, and dismissals, for the creation of new departments or chairs, etc., must be submitted by the President to the Advisory Board. The Advisory Board is also privileged to make such recommendations to the President, regarding policy, as it may decide by vote to be expedient, but no recommendations for appointments, promotions, or dismissals, may originate with the Advisory Board.

The Executive Committee of the Academic Council consists of the President, Vice-President, Registrar, and two members from each department group elected by the Academic Council. The Executive Committee appoints the Academic Committees of the Council.

The Standing Administrative Committees of the Council are appointed by the President subject to the approval of the Advisory Board.

The Department Faculties consist of the professors, associate professors, assistant professors, and instructors in the several departments, but only members of the Academic Council have the right to vote. A Department Faculty has direction of the work of instruction in the department and of the internal administration of the department, subject only to such control as is vested in the Board of Trustees, the

President of the University, and the Academic Council. The Executive Head of the Department Faculty is designated by the President with the approval of the Advisory Board and of the Board of Trustees.

Departments

The work of the University embraces the following departments, divided into groups for the purpose of elections to the Advisory Board and Executive Committee, as indicated:

(I) Greek, Latin, Germanic Languages, Romanic Languages, English Literature and Rhetoric, English Philology; (II) Botany, Physiology and Histology, Zoology, Entomology and Bionomics, Medicine; (III) Psychology, Mathematics, Physics, Chemistry; Geology and Mining; (IV) Philosophy, Education, History, Economics and Social Science, Law; (V) Graphic Art, Applied Mathematics, Civil Engineering, Mechanical Engineering, Electrical Engineering.

The Marine Biological Laboratory, founded by the liberality of Mr. Timothy Hopkins, and located at Pacific Grove, on the Bay of Monterey, is a branch of the biological work of the University.

Location

The University is located on the "Palo Alto Farm" in the Santa Clara Valley, thirty miles southeast of San Francisco, on the Coast Division of the Southern Pacific Railway. The grounds of the University consist of over seven thousand acres, partly level and partly rising into the foothills of the Santa Cruz Range. The Bay of San Francisco lies about three miles east of the University grounds. Across the bay the Monte Diablo Range rises to a height of over four thousand feet, the Lick Observatory crowning Mt. Hamilton, the highest of the range.

The Santa Clara Valley is one of the most attractive portions of the State in climate, in natural beauty, and in the adaptiveness of its soil to all the varied products of California. In winter the mercury rarely falls below 30 degrees, with an average midday temperature of about 55 degrees. In summer the midday temperature ranges between 60 degrees and 80 degrees, with occasional higher and lower numbers, the average being about 70 degrees; the nights are cool, the usual range being from 50 degrees to 58 degrees. The rainfall, normally about fifteen inches, is chiefly confined to the months from December to April, inclusive.

Buildings

The central group of buildings, constituting two quadrangles, the one surrounding the other, is an adaptation of the Mission Architecture, and reproduces on an imposing scale the open arches, long colonnades, and red tile roofing of the old Spanish Missions of California. The Inner Quadrangle consists of twelve one-story buildings and the Memorial Church, connected by a continuous open arcade, and surrounding a court 586 feet long by 246 feet wide, or three and a quarter acres. The buildings are of buff sandstone, somewhat varied in color, the stonework of broken ashlar, with rough rock-face, and the roofs covered with red tile.

The fourteen buildings of the Outer Quadrangle are constructed of the same material and in the same general style as the Inner Quadrangle. They are also connected on the outer side by open arcades extending entirely around the quadrangle. The extreme length of the Outer Quadrangle is 894 feet.

The Leland Stanford Junior Museum, situated a quarter of a mile from the Quadrangles, on the west side of the Palo Alto Avenue, contains the archæological and art collections of the University.

The Chemistry Building, located between the Quadrangles and the Museum, consists of two separate structures—the main building and the Assaying Laboratory.

Behind the central quadrangles are located the workshops of the Engineering departments, experimental laboratories, power-houses, etc.

The dormitories are east and west of the Quadrangles. Encina Hall, for men, is at the east, and has accommodations for three hundred students. Roble Hall, for women, is at the west, and will accommodate one hundred students. Madroño Hall, frame building, at present leased to private parties, receives only women students. It will accommodate about thirty students.

Encina Gymnasium and Roble Gymnasium are frame buildings, equipped with the apparatus and appliances for physical training.

The University Inn is a frame building intended primarily as a University commons for students living on the campus.

The grounds immediately about the University have been reserved in part for experimental and ornamental purposes, in part as residence sites for members of the Faculty and others who may desire to live on the University campus.

Buildings of the Medical Department

The buildings in San Francisco occupy four fifty-vara lots bounded by Clay, Sacramento, and Webster streets, and consist of the Clinical and Laboratory Building; Lane Hall; Lane Hospital, a modern building in brick and stone, with a capacity of one hundred and eighty beds; and the Nurses' Home. The new Medical Library Building, erected from funds left for the purpose by Dr. Levi Cooper Lane and an additional sum presented by the Directors of Cooper Medical College, is a fireproof structure of Colusa sandstone, three and a half stories high, with steel stacks accommodating 80,000 volumes. It will be ready for use in 1912-13.

ADMISSION TO THE UNIVERSITY

[For special regulations governing admission of women, see p. 53.]

I. FIRST-YEAR STANDING.

Candidates must be at least sixteen years of age. They must present satisfactory recommendations as to personal character, and must offer credentials amounting to fifteen entrance units as indicated below. Women must make formal application in advance on blanks to be furnished by the Registrar (see pp. 53-54).

An *Entrance Unit* represents a year's study in any subject in a secondary school, constituting approximately one quarter of a full year's work. In assigning credit values two laboratory, drawing, or practice periods, not requiring additional study or preparation, are regarded as the equivalent of one recitation period. The length of the school year is assumed to be from thirty-six to forty weeks.

Entrance on Recommendation

Undergraduate standing, without further tests, is granted as follows:

1. To graduates of approved preparatory schools who have completed a regular four years' course, amounting to not less than *fifteen* entrance units, and who are fully recommended to the University.

It is the purpose of the University to emphasize (1) quality of preparation and intellectual promise; (2) personal character and seriousness of purpose. Principals are expected to exact a high standard of scholarship as preliminary to recommendation, and to withhold recommendation from those who are undesirable or unpromising from the point of view of moral qualities or habits.

In fixing its recommending standard a school may properly provide that lower passing grades in a particular subject or subjects may be offset by a general high average or by decided intellectual promise. But subjects completed with private tutors, or under other than regular school conditions, should not ordinarily be recommended. Where the course of study includes the newer subjects, in which high school standards are not fixed, the quantity and quality of work must be specially evidenced; in music, the candidate will be expected to pass

the examinations of the College Entrance Examination Board or similar university examinations.

Approved Preparatory Schools are schools maintaining full four years courses of high school work and accredited (1) by The New England College Entrance Certificate Board, by The North Central Association of Colleges and Secondary Schools, by colleges and universities of recognized standing, or (2) upon inspection undertaken or authorized by the University.

The University records of first-year students will be considered as additional evidence of the standing of preparatory schools and of their good faith and success in meeting the requirements of the University, and such evidence will be made use of in determining as to the continuance of accrediting relations.

2. To recommended graduates of California State Normal Schools, and to graduates of other Normal Schools approved by the California State Board of Education as of equal rank with California State Normal Schools, who are holders of the highest grade diploma issued by these Normal Schools. (For conditions on which advanced standing may be granted Normal School graduates, see p. 52.)

3. To holders of seventy-two-count Diplomas issued by the Regents of the State of New York, granted *with credit, with great credit,* or *with highest credit.*

4. To candidates from China, Japan, Mexico, and other foreign countries who present credentials showing the satisfactory completion of courses of study equivalent to those of approved American high schools. In Japan such courses of study must extend at least two years beyond graduation from a middle school; in Mexico, graduation from the National Preparatory School or from other preparatory schools maintaining six years courses, will be required. Before admission to the University such candidates must show ability to use, and to understand readily, both written and spoken English; if coming directly from these countries they must ordinarily expect to spend at least one year in an American preparatory school, or under special instruction in English, before being able to meet this test.

Recommendations will be considered at any time of the year, but, to avoid uncertainty and give opportunity for correction of errors and misunderstandings, they should be forwarded to the University as soon as possible after graduation.

Blanks for admission on recommendation may be obtained from the Registrar.

Entrance on Examination

No extrance examinations are given by the University. In general, candidates are advised to remain in the preparatory school until they fulfill the requirements for admission on recommendation; but if prepared to enter on examination, or desiring to supplement incomplete recommendation, they should take the examinations of the College Entrance Examination Board which are held in all parts of the United States and in various foreign countries.

In 1912 the entrance examinations of the College Entrance Examination Board will be held June 17-22.

All applications for examination must be addressed to the Secretary of the College Entrance Examination Board, Post Office Sub-Station 84, New York, N. Y., and must be made upon a blank form to be obtained from the Secretary of the Board upon application.

Applications for examination at points in the United States east of the Mississippi River, also at Minneapolis, St. Louis, and other points on the Mississippi River, must be received by the Secretary of the Board at least two weeks in advance of the examinations, that is, on or before Monday, June 3, 1912; applications for examination elsewhere in the United States or in Canada must be received at least three weeks in advance of the examinations, that is, on or before Monday, May 27, 1912; and applications for examination outside of the United States and Canada must be received at least five weeks in advance of the examinations, that is, on or before Monday, May 13, 1912.

Applications received later than the dates named will be accepted when it is possible to arrange for the admission of the candidates concerned, but only upon the payment of $5 in addition to the usual fee.

The examination fee is $5 for all candidates examined at points in the United States and Canada, and $15 for all candidates examined outside of the United States and Canada. The fee (which cannot be accepted in advance of the application) should be remitted by postal order, express order, or draft on New York to the order of the College Entrance Examination Board.

A list of the places at which examinations are to be held by the Board is published about March 1 each year. Requests that the examinations be held at particular points, to receive proper consideration, should be transmitted to the Secretary of the Board not later than February 1.

In these examinations the University will accept a mark of 60 as the lowest passing grade.

A Definition of Requirements in the various subjects in which examinations are held is given in Document No. 53, issued by the Board. (Price, 10 cents: address Secretary, College Entrance Examination Board, Post Office Sub-Station 84, New York, N. Y.)

Entrance Subjects

The standard of preparation is the four years' high school course. The proper co-ordination of high school subjects for the individual pupil is regarded as primarily a problem for the secondary school; the University is prepared to recognize for entrance credit any subject having an established place in the secondary school curriculum, in which adequate instruction is given and which is pursued to satisfactory results.

No prescription, other than English, is made. Candidates desiring to study mathematics must obviously offer such elementary mathematics as is not taught in the University, and engineering students are expected to offer also solid geometry and trignometry. Candidates desiring to study Latin should offer at least two entrance units in that subject. The State law governing the practice of medicine in California prescribes, among other requirements, that the preparatory course of every person practicing medicine or surgery in the State shall have included two years of Latin (or four years of high school German or French, or its equivalent, provided a satisfactory examination is passed in the elements of Latin grammar), two years of mathematics, two years of English, one year of history, two years of laboratory science, and six years of further credits in language, literature, history, or science.

All first-year undergraduates (including special students and students coming from other institutions with less than twenty units of advanced credit) will be required to satisfy the University standard in English Composition. This may be done by passing a special Matriculation Test given during matriculation week. The examination will test the candidate's ability to write exercises not only free from marked deficiencies in spelling, punctuation, sentence structure, and paragraphing, but also indicative of his ability to think consecutively on a simple subject. The subjects which are set at the time of the examination will be drawn for the most part from the candidate's own experiences.

A student who passes this test may be exempted from Composition work in the University, or may enter Course 2 in the Department of English. A student who does not pass will be required to register in English A at once (unless, by reason of numbers, such registration is postponed to a later semester), and remain in the course until his work is of passing grade. Some students, whose work shows exceptional promise of maturity, may be assigned to English 2 instead.

The definition of high-school subjects given by the College Entrance Examination Board (Document No. 53 issued by the Board) will serve as a standard, and also, for California schools, the outline prepared by the University of California. The following suggestions and explanations will indicate the attitude of the University in judging entrance credentials, but no attempt is made to enumerate all the subjects which may be properly included in the high school curriculum.

1. English.—The work in English Composition should be given at least two recitations a week throughout the entire high school course. The greater part of this time should be devoted to practice in writing, but it is recommended that some attention be also paid to instruction in the fundamental principles of formal rhetoric.

The work in English Literature should be given an average of at least three recitations a week throughout the four years of the preparatory course. It should be so conducted as to give the student not only an appreciative understanding of the books selected either for general or for more intensive study, but also a knowledge of their place in the history of English Literature, and especially an ability to read aloud intelligently both prose and verse.

In the History of English Literature preparation should consist in a brief outline with a view to making clear the character and the tendencies of the more important literary epochs and associating the chief books and authors in their proper periods.

2. Mathematics.—The work in Mathematics is usually distributed as indicated by the following unit values: algebra (1 to 2), plane geometry (1), solid geometry (½), trigonometry (½). Additional work may be offered in algebra and plane analytical geometry. The solution of numerous original problems and exercises is assumed throughout the course.

3. The Sciences.—In Physics, Chemistry, Physiology, Botany, Zoology, Hygiene, and General Science a full year's work in each is expected comprising, preferably, two recitation periods and three double laboratory periods per week. Accurate notes of the laboratory

work should be kept. Any two of the biological sciences (Physiology, Botany, Zoology) may be combined into a continuous year's course. Astronomy may be offered as a half-unit course.

Students who receive entrance credit in Chemistry, and who wish to continue the subject in the University, will be admitted at once to course *a*II and will be required to begin course 1.

In Physiology the text-book work should be accompanied by experiment, dissection of animals and organs, and a certain amount of study of the tissues with the microscope.

In Botany the main thing is that the work shall be of a practical nature; that the study be mainly specimens and not books. A study of the growth and development of the forms selected is of the highest importance, and should be made a prominent feature in the work. If possible, the pupil should be allowed the use of a compound microscope; but when this is not practicable, microscopic demonstrations by the instructor are indispensable.

In Hygiene the work should include adequate instruction in personal hygiene, the hygiene of occupation, and the relation of the citizen to the State in matters of sanitation and public health. Three periods per week of physical training and three periods in experimental laboratory work in Hygiene, and two recitations per week on Public Health, or an equivalent amount of work distributed over a longer period, will cover the requirements for one unit of credit.

4. History and Allied Subjects.—History should be offered in full unit courses covering respectively the following divisions: (*a*) Ancient, (*b*) Mediaeval and Modern, (*c*) English, (*d*) American. Civics may be offered as a part of American history, or as an additional half-unit course. Biblical History and Literature and Economics may each be offered as a half-unit or as a unit course.

In the History subjects, in addition to the text-book preparation, the following exercises are recommended: Supplementary reading, including the use of original material where possible, notes and digests of reading; abstracts or analyses of specified chapters, both of the text-book and supplementary reading; outlines of subjects, gathering material from all available sources; map drawing from printed data or comparison of existing maps, showing movements of exploration, migration or conquest, territorial changes, or social phenomena. Such work should be regarded as a means rather than the end of historical study, and in every instance should be adapted in character and amount to the stage of advancement of the class and of the individual

pupil. As the pupil progresses in his study, more advanced work may well be required in the form of historical composition, and of note-taking in the class from talks by the teacher or reports of fellow pupils.

5-6. Spanish and French.—The elementary study of the languages, covering two years of daily recitations, should lay stress on the following points:

(1) An accurate knowledge of the forms of the languages; (2) The elements of syntax; (3) The ability to turn easy English prose into French or Spanish; (4) The ability to translate ordinary French or Spanish into idiomatic English; (5) The ability to pronounce French and Spanish correctly.

The Intermediate requirements are intended to represent a third year of daily recitations. The specific demands are:

(1) A thorough knowledge of modern French and Spanish syntax. (2) The ability to turn ordinary modern French and Spanish at sight into idiomatic English. (3) The ability to translate connected English prose of moderate difficulty into French or Spanish. (4) The ability to write French or Spanish from dictation. (5) Some facility in speaking the languages.

The Advanced requirements will occupy a fourth year of daily recitations. At the end of this course the student should be able:

(1) To read at sight any standard author not earlier than the seventeenth century; (2) to write in French or Spanish a short essay on some simple subject connected with the works read; (3) to translate correctly a passage of modern English prose; (4) to carry on a simple conversation in French or Spanish; (5) to follow a lecture in French or Spanish.

The reading in the Elementary course should cover from four hundred to six hundred duodecimo pages; in the Intermediate course a similar amount should be read of prose and verse, a portion to be in the dramatic form; and in the Advanced course the same quantity of prose and verse should be selected from standard authors not earlier than the seventeenth century, and these should be read with reference to their literary value.

The practice of writing compositions consisting in reproductions or paraphrases of the matter read should be begun in the Intermediate course and followed by short themes along similar lines in the Advanced course.

7. **German.**—The elementary study of the language, covering two years of daily recitations, should include the following requirements:

The ability to read understandingly easy German prose and verse at sight; an accurate knowledge of the most important elements of grammar, embracing especially inflections, word-order, and the essentials of syntax, as also the ability to appreciate the force of prefixes and suffixes; the ability to express in correct German simple ideas concerning familiar things; the ability to make oral use of the German learned and to recognize German words and simple sentences when spoken. Careful attention should be given to pronunciation and accentuation, in order to insure the power to read German fluently and intelligently.

This preparation is represented, approximately, *in reading*, by material of the character of Thomas and Hervey's Reader, and the careful study of one or more modern dramas (about two hundred duodecimo pages of easy German), supplemented by the reading of German lyrics and ballads, a number of which should be memorized; *in composition*, by daily practice in reproducing in one form or another the German read and in writing in German.

Intermediate German represents a third year of daily recitations covering the following requirements:

The ability to read intelligently ordinary German prose and verse at sight; some knowledge of word-formation and derivation; practical familiarity with the principles of syntax, with special reference to the uses of the tenses and cases, the modal auxiliaries, and the moods; increased ability to write and speak German.

It is believed that this preparation can be acquired by continued practice such as is suggested above, in connection with the careful reading of five hundred duodecimo pages of contemporary and classical prose and verse, in addition to the reading required for Elementary German. It is recommended that about one-half of this reading be selected from the works of living or recent writers, such as Otto Ernst, Storm, Keller, Freytag, etc.; and the other half from such classics as Lessing's Minna von Barnhelm, Schiller's Wilhelm Tell, and Goethe's Wahrheit und Dichtung. Particular attention should be paid to the literary value of the works read. It is also desirable that candidates should acquire the ability to understand and take part in a recitation conducted in German.

Advanced German represents a fourth year covering, in addition to the preparation in Elementary and Intermediate German, the following requirements: A firmer hold on the important elements of German Grammar; a thorough knowledge of at least two of the following classics: Goethe's Hermann und Dorothea or his Iphigenia, Lessing's Nathan der Weise, and Schiller's Wallenstein, as well as of two or more recent dramas, all of which should be studied as much as possible with an eye to the appreciation of their literary value; some familiarity with the technical language of literature and science; the ability to compose in German with ease and to follow lectures delivered in German.

8. Latin.—The reading required in elementary and advanced Latin (4 units), without regard to the prescription of particular authors and works, is not less *in amount* than Caesar, Gallic War, I-IV; Cicero, the orations against Catiline, for the Manilian Law, and for Archias; Virgil, Aeneid, I-VI.

An equivalent amount of reading from authors other than these specified above may be substituted. The following are suggested: Caesar, Civil War; Eutropius; Nepos; Terence, Phormio; Cicero, Letters; Sallust; Virgil, Bucolics and Georgics; Ovid, Metamorphoses.

Exercises in translation at sight should begin in school with the first lessons in which Latin sentences of any length occur, and should continue throughout the course with sufficient frequency to insure correct methods of work on the part of the student. From the outset particular attention should be given to developing the ability to take in the meaning of each word—and so, gradually, of the whole sentence—as it stands; the sentence should be read and understood in the order of the original, with full appreciation of the force of each word as it comes, so far as this can be known or inferred from that which has preceded and from the form and position of the word itself. The habit of reading in this way should be encouraged and cultivated as the best preparation for all the translating that the student has to do. No translation, however, should be a mechanical metaphrase. Nor should it be a mere loose paraphrase. The full meaning of the passage to be translated, gathered in the way described above, should finally be expressed in clear and natural English.

The school work in Latin should include much reading aloud, writing from dictation, and translation from the teacher's reading. Learning suitable passages by heart is also very useful, and should be practiced.

The work in composition should give the student a better understanding of the Latin he is reading at the time, if it is prose, and greater facility in reading. It is desirable, however, that there should be systematic and regular work in composition during the time in which poetry is read as well; for this work the prose authors already studied should be used as models.

9. Greek.—In Elementary Greek (2 units) the following requirements should be covered: Grammar, the inflections and the essential points of syntax; Xenophon's Anabasis, Books I-IV, or an equivalent; prose composition. It is expected of every pupil that he be able to read Greek aloud without stumbling.

In Advanced Greek (1 unit): Homer, Iliad, Books I-III, or an equivalent; advanced prose composition. The pupil should have a good acquaintance with the forms and syntax of Homer, and be able to scan any given passage exactly and to read it rhythmically. In the writing of Greek the pupil should have a year's training beyond that required in Elementary Greek.

10. Drawing and Applied Art.—In each of the drawing subjects (Freehand, Mechanical, and Architectural) a unit of credit represents daily double periods for a year or single periods for two years.

In Freehand Drawing approximately two-thirds of the time should be given to representation and one-third to decorative and constructive design. *Representation* should include: object drawing, boxes, books, bowls, vegetables, machine parts, drawn in various positions with attention to perspective facts in line and also to light and shade; plant forms, seed pods, shells, insects, animals, and simple landscape, drawn in line, in light and shade, and in color; composition, exercises in arrangement and adaptation of pictorial subjects into good composition, using both rhythmic line arrangement and harmonious color. The style of drawing should be direct, facile and effective, adapted to the thing drawn, with refinement in its proper place and vigor in its proper place. The pupil should be equally familiar with the use of pencil and charcoal or brush. *Design* should include (1) Exercises in space filling, borders and all-over patterns with use of geometric and organic forms. (2) Principles of constructive and decorative design applied to simple objects, as: in printing, a title-page or program; in textiles, a stencil or embroidery design for a curtain or table-scarf; in wood, working drawings for a chair, table, clock-case, book-rack, etc.; in metal, cabinet hardware and lighting fixtures, etc. Talks supplemented by photographs of the best paintings

and architecture, and talks upon taste in home furnishing and appointments, with visits to worthy examples, should supplement the course, with a view to developing an enlightened taste in art.

In Mechanical Drawing the pupil is expected to acquire neatness and accuracy in the use of drawing instruments. His course should include practice in line work, lettering, machine or architectural working drawings, and tracing. Recognition, commensurate with the length of course and the degree of proficiency attained in the use of instruments, will be given, however, to courses consisting of line work, lettering, and the construction of geometric figures.

11. Shopwork.—Two things are expected: First, a knowledge of the materials and tools used, and a thorough understanding of the principles involved in the operation performed; second, manual dexterity, as evidenced by neatness, accuracy, and despatch in the execution of a given piece of work.

In Woodworking (½ unit) the pupil should have the ability to recognize the common varieties of wood, and some knowledge of their physical properties, such as ease of working, strength, toughness, hardness, etc., is expected. He should be familiar with the uses of the principal hand tools of carpentry and with their care, be able to make the ordinary kinds of joints and splices, and be familiar with the operation of the lathe, jig-, band-, and circular-saws, and planing machines.

Forge Work (½ unit) demands an elementary knowledge of the properties of wrought iron and steel, and of the proper heats at which to work them. The management of forge and fire and the nature and uses of all the ordinary blacksmithing tools should be known. The pupil should be able to execute all of the common forging processes, including the various forms of welds in iron and steel; he is also expected to understand hardening, tempering, and annealing.

In Foundry Work (½ unit) the pupil should have a knowledge of the tools and processes used in the ordinary forms of green sand moulding and core work. He should have had experience in the operation of the cupola and know how to charge and operate it. He should have a knowledge of the properties of cast iron, and experience in pouring cast iron as well as in moulding.

Machine Shop Work (½ to 1 unit) demands a knowledge of the tools and processes used in the working of iron, steel, and brass. The pupil should be able to execute all forms of vice-work, such as chipping, filing, scraping, fitting, and finishing. He should be familiar,

through experience in operation, with the simpler forms of machine tools, such as the lathe, drilling machine, planer, shaper, and milling machine.

12-15.—In Agriculture, Horticulture, Domestic Science, Commercial Subjects, and Music the outline prepared by the University of California is suggested; also, in music, the definition given by the College Entrance Examination Board.

II. SPECIAL STUDENTS

Persons under twenty-one years of age will not be received as special students.

The privileges extended to special students are not intended for those who come directly from the schools, with insufficient preparation for regular standing, but for those who are qualified by age, character, practical experience, and habits of study to profit by university courses. (On account of the limitation upon the number of women students, women are not admitted as special students.)

Special students are subject to the same University regulations as regular undergraduates, and they may become candidates for graduation upon fulfilling all University requirements (see p. 58).

Blank applications for admission as special students may be obtained from the Registrar.

III. ADVANCED STANDING

Students from other institutions of recognized collegiate rank, who present satisfactory credentials, may be admitted to such standing and upon such terms as the Faculty may deem equitable. Students from institutions of equivalent rank, who maintain a satisfactory record after admission, may expect to receive the same standing as at the former institution, except that no such student can be given more than three years' advanced credit(ninety unit-hours toward graduation), and that differences in standard of entrance preparation will be taken account of. Every candidate must present a full certified transcript of his college record, including entrance credit, and a letter of honorable dismissal. Women with less than two years of college standing must make formal application in advance on blanks to be furnished by the Registrar (see pp. 53-54).

Recommended graduates of approved State Normal Schools where the normal training has been preceded by a full four years' high

school course, or where high school and normal school course together cover six years' work, may ordinarily be granted an advanced credit of thirty units.

Blank applications for admission to advanced standing may be obtained from the Registrar.

All applications for advanced standing on the basis of work done before entering the University must be filed within two years after matriculation; and such applications will not be received at a later date.

IV. GRADUATE STANDING

Graduates of institutions of recognized collegiate rank may be admitted to graduate standing in the University upon presentation of diplomas or equivalent credentials. Admission to technical graduate standing does not imply admission to candidacy for an advanced degree (for the conditions of such candidacy see p. 75.) If graduates of other universities desire to become candidates for the baccalaureate degree, the question of units required for graduation may be waived, upon approval of the Committee on Admission and Advanced Standing, and the degree conferred on the satisfactory completion of not less than thirty units of University work and the fulfillment of all major and minor requirements. Graduate students not candidates for any degree, may be permitted, upon the approval of the major department, to undertake such work as their previous training seems to warrant.

Special Regulations Governing Admission of Women

The Founding Grant of the University, as amended May 31, 1899, directs "that the number of women attending the University as students shall at no time ever exceed five hundred." In conforming to this provision the following plan of admission has been adopted:

Graduates of other universities and candidates who have completed at least two full years in a college or university of recognized standing, will be admitted without previous application, provided they present themselves for matriculation upon the regular registration days. Women once admitted to the University will be allowed to continue without further application, so long as scholarship and conduct are satisfactory, and provided they present themselves for registration on the regularly appointed days. Places will not be held for women after

the regular registration days, except by permission of the Committee on Registration granted in advance.

For the remaining number of women students permitted by the Founding Grant (for August, 1912, approximately 100) the plan of admission is as follows:

Applications may be made at any time. They must state the proposed time of entrance and the credentials which the candidate expects to offer. To insure consideration, applications made more than ten months before the proposed date of matriculation must be renewed (by written notice or new application) some time during the ten months immediately preceding the proposed date of matriculation. Blanks for application may be obtained of the Registrar.

Numbered lists will be begun July 10th (for the August-September matriculation), and October 10th (for the January matriculation). All candidates whose credentials are complete and in the hands of the Registrar on the dates specified will be given numbered admission cards in the order of original application. After the first lists are made up, additional numbered cards will be issued in the order in which complete credentials are received, the order of original application applying where the complete credentials of more than one candidate are received on the same date.

Complete credentials comprise: *For first-year standing,* (1) formal application, (2) fifteen accepted entrance units; *for advanced standing,* (1) formal application, (2) full certified transcript of college record, including entrance credits, (3) letter of honorabe dismissal. (Formal application is waived in the case of candidates with full junior standing.)

On registration day candidates will be preferred in their serial order. After registration day the serial order of candidates actually present will be observed.

Candidates receiving numbered cards for a given date, but not matriculating at that time, may be transferred to any succeeding list, in their serial order, by giving due notice to the Registrar (before October 10th, or July 10th, as the case may be).

UNIVERSITY RESIDENCE

Registration

On the appointed Registration Days, in August and January, each student must obtain a certificate of registration *in person,* at the Registrar's office.

Matriculated students may register after the appointed Registration Days and during registration week, upon payment of a special fee of two dollars; during the week following the fee for late registration will be four dollars; after that the fee will be increased one dollar for each week's delay. Registration of undergraduates and specials will not be permitted later than one month after the beginning of instruction.

Study Card

At the Registrar's office the student receives a card for selection of studies for the semester. This card, properly filled out, and approved by the major department, must be filed with the Registrar at the time of Registration; but late study cards will be accepted upon payment of a special fee of two dollars. Students registering late are admitted to particular classes only by permission of the instructors concerned. All work for which University credit is desired must be duly registered.

Enrollment in Classes

A student desiring to enter any class must present his certificate of registration to the instructor for enrollment at the beginning of each semester. Whether the student is qualified for enrollment in a particular class is a question to be decided by the instructor in charge. In general, the prerequisites for taking any given course are noted under "Courses of Instruction."

Change of Studies

A student desiring to drop a subject once taken up, or to take up a new subject after the study card has been filed, must present to the Committee on Registration a petition for such change, approved by the major department and by the instructors whose subjects are to be taken or dropped. In general, petitions so approved, if they do not give the student too many unit-hours, or too few unit-hours, and if presented within three weeks after the beginning of the semester, are

granted without question. If presented at a later time in the semester they will be granted only for extraordinary reasons, and, where the taking up of new subjects is involved, only on payment of a special fee of two dollars for each course; if otherwise acceptable but presented after the close of the semester, they will be granted only on payment of a special fee of four dollars for each course. In the case of petitions to drop subjects during the last six weeks of the semester, action will be deferred until the close of the semester.

Change of Major Subject

Petitions to change the major subject will be granted when approved by the departments in charge of both the old and the new subjects, the student being held to all the requirements of the new major subject. (First-year students may change their major subject at the end of the first or second semester without petition.) In general, the major subject may be changed at the end of the first year, and in some cases later, without appreciable loss of time to the student.

Amount of Work

Fifteen hours per week of recitations or lectures or an equivalent in laboratory work, constitutes an average semester's work. In general, students may register for a few as *thirteen* or as many as *eighteen* unit-hours; but in the case of students doing outside work for self-support or otherwise, and where considerations of health are involved, special restrictions will be made upon recommendation of the professor of hygiene; and where conditions or failures have been incurred in the preceding semester, not more than *fifteen* units may be registered unless by special permission of the Committee on Registration granted in advance. Permission to register for less than *thirteen* units may also be granted for special reason; but registration for less than *ten* units will not ordinarily be accepted. Not more than eighteen units may be credited toward graduation for any semester's work, unless, in exceptional cases, permission to register for additional units is granted in advance. Graduate students are not held to any special number of unit-hours, but registration will not ordinarily be permitted unless such students are prepared to devote at least half of their working time to University study. Petitions for irregular registration should be presented at the beginning of the semester.

Every unit for which credit is given is understood to represent approximately, for the average student, three hours of actual work per

week, through one semester. Thus, in lecture or recitation work, for one unit of credit one hour per week may be allotted to the lecture or recitation and two hours for preparation or subsequent reading and study on the part of the student; but if a less amount of time is allotted for preparation or subsequent reading or study, there shall be a proportionate decrease in the amount of credit. Where the time is wholly occupied with drawing, field, or laboratory work, or in the class-room work of conversation classes, three full hours per week through one semester are expected of the student for each unit of credit; but where such work is supplemented by systematic outside reading or experiment under the direction of the instructor, such a reduction may be made in the actual drawing, field, laboratory, or class-room time as seems just to the department concerned.

Conditions and Failures

A student conditioned in any subject may arrange with the instructor concerned for such supplementary examinations or study as will make good the deficiency; but such deficiency must be removed within one year after the condition is incurred, otherwise the condition will be considered a failure. Work reported as incomplete may be made up during the first or second semester's registration after the incomplete is incurred; but if not made up until the second semester, the incomplete work shall be duly entered on the student's study card and shall count as part of the permitted registration for that semester to the extent of the actual unit-hours required for making up such incomplete work as estimated by the instructors concerned. A student failing in any subject cannot receive credit for the portion in which the failure is incurred until the subject has been re-registered and taken over again in class. A condition or failure or withdrawal from class without permission of the Committee on Registration, limits the student to *fifteen* units the semester following.

Mid-semester reports on scholarship are obtained from all instructors, and students reported as doing unsatisfactory work are notified of their deficiencies. A student whose work is unsatisfactory may be placed on probation at any time. At the middle and at the end of the semester each department shall be notified of all serious deficiencies in scholarship affecting students whose major work is in that department.

A student who receives passing grades in less than half the work for which he is registered during his first semester, or in less than

two-thirds during any subsequent semester, shall be deemed to have failed in his studies. After a first failure, unless unusually serious, a student may, with the approval of the major department, again register in the University, but shall be placed on probation for one semester. A second failure shall result in withdrawal from the University. Work marked "incomplete" will be considered of passing grade only when reported as satisfactory in quality and not seriously deficient in quantity.

A student whose delinquency is unusually serious, or is the result of persistent neglect, may be required to withdraw from the University at any time.

Leave of absence will not generally be granted to a student on probation, nor to any student whose work during the current semester is unsatisfactory, unless applied for at least six weeks before the end of the semester.

A student on probation may not take part in any intercollegiate contest, nor represent the University in any way, whether individually or in connection with any athletic, literary, musical, dramatic, or other organization.

From Special to Regular Standing

Special students may be entered in regular standing and become candidates for graduation, on passing examinations in the required number of entrance subjects, provided such examinations are passed not later than two years after matriculation. In place of entrance examinations, university work to the amount of five units for each entrance deficiency may be offered in university subjects which are also included in the entrance group.

A special student who has completed one hundred and fifty units of university work, including all major requirements, and whose general university record is deemed proof of superior scholarship, may become a candidate for graduation on approval of the Committee on Admission and Advanced Standing. Petitions to this end will not be considered by the Committee until after the student has completed one hundred and twenty units of university work.

University Credit for Extra Entrance Subjects

Credit toward graduation may be given for entrance subjects in excess of the number required for admission, provided such extra entrance subjects are also university subjects, and are successfully continued in the University within two years after matriculation, and

provided the student's general University record is deemed proof of superior scholarship. In general, three units of advanced credit will be granted for each extra entrance unit representing elementary work in a given subject, and five units of advanced credit for each extra entrance unit representing advanced work. Application for such university credit must be made within two years after matriculation. After matriculation additional entrance units may be offered only for the purpose of making up entrance deficiencies.

University Credit for Special Courses

University credit is given only for work done in residence at the University. Work prescribed by any professor of such a nature that it cannot be done at the University or can be more advantageously done elsewhere may be regarded as work done in residence. But such special work must be duly registered in advance; or, if not registered in advance but approved later, may be credited only upon payment of a special fee of two dollars for each course.

Matriculated students on leave of absence may take work in other universities, usually without any restrictions other than those imposed by the university in question. But work undertaken in any Summer Session may be subject to special regulations, and must be approved by the major department and by the department in which the work is to be taken. The last semester's work of every candidate for a degree must be taken in this University, except that, in special cases, students who have obtained at least ninety units in resident work at the University and who have completed all major department requirements may be exempted from this regulation.

Advanced Standing

Advanced standing for work done before matriculation will generally be given only when certified as having been completed in some institution of recognized collegiate rank, except as provided above for extra entrance units, or, in particular cases, to recommended graduates of approved State Normal Schools (see p. 61). But in special cases permission may be given by the Faculty to receive credit on examination for work equivalent to regular University courses. Application for such examinations, with satisfactory evidence of the work accomplished, must be presented to the Committee on Advanced Standing. Applications for advanced standing on the basis of work done before entering the University must be made within two years after matriculation.

Leave of Absence

A student desiring to leave the University for a brief time should apply to the Committee on Registration. If leave of absence is desired on account of sickness, the petition must be indorsed by the professor of hygiene. A leave of absence is merely a justification of the absence and not a relief from the work that has been missed. A leave of absence is usually necessary only in case of interrupted work; a student in good standing absent one or more semesters may re-enter at the beginning of any semester without formal petition.

Honorable Dismissal

An honorable dismissal means that the student is permitted voluntarily to withdraw from the University and is commended to the favorable consideration of any institution he may wish to enter. An honorable dismissal may be granted upon written application to any student not under discipline for misconduct.

Conduct of Students

In the government of the University the largest liberty consistent with good work and good order is allowed. Students are expected to show both within and without the University such respect for order, morality, personal honor, and the rights of others as is demanded of good citizens. Failure to do this will be sufficient cause for removal from the University.

In 1908 the Board of Trustees of the University provided that in all future rentals or leases of houses as fraternity chapter houses it shall be expressly stipulated that no intoxicating liquors of whatever kind shall ever be sold or used on the premises. The Trustees also by formal resolution requested the Academic Council to prohibit the use of liquor in fraternity chapter houses, student club houses, and other student lodgings.

This action of the Board of Trustees is in harmony with the instructions given by the Academic Council to its Committee on Student Affairs, and defines the policy of the University. Prohibition of the use of liquor extends to all student lodgings whether on the campus or elsewhere. The University assumes that the act of registering as a student implies full acceptance of this policy.

Tuition and Incidental Fees

The Constitution of the State of California, as amended November 6, 1900, authorizes the Legislature, under certain conditions, to exempt the property of the University from taxation, provided residents of California are charged no fees for tuition unless such fees shall be authorized by the Legislature. An Act of the Legislature, approved February 14, 1901, "exempting from taxation a portion of the property held in trust for the benefit of the Leland Stanford Junior University," as amended in March, 1907, provides "that while this Act is in force no fees shall be charged residents of this State for tuition, except that such fees may be charged in professional and engineering courses, but no such fees shall be charged to any student who is registered in any such courses when this Act takes effect."

Tuition Fees are charged in Law, for professional law courses, as follows: for students registering for thirteen or more units in law in any semester, *twenty-five dollars* per semester; for students registering for less than thirteen units in law for any semester, *two dollars* per unit per semester.

The Tuition Fee in the Department of Medicine is *one hundred and fifty dollars* per year.

An Incidental Fee of *fifteen dollars* per semester is charged to all registered students with the following exceptions: (1) Those registered in the professional courses of Law and Medicine, paying tuition fees in those departments amounting to fifteen dollars or more per semester; (2) graduate students accepted as candidates for an advanced degree.

Students in laboratory courses pay for the materials which they use, and in various courses syllabus and other fees may be charged. Laboratory and syllabus fees are different for the different courses, ranging from *fifty cents* to *twenty-five dollars* per semester.

Laboratory fees are ordinarily returnable as follows when duly claimed in writing within two months after the date of withdrawal from the University: thus, the whole amount will be refunded when the student withdraws within one week of the beginning of a semester, and one-half the amount if the student withdraws before the middle of a semester; but no fees will be refunded on account of withdrawals after the middle of a semester, nor unless claimed in writing within two months after the date of withdrawal. (This regulation is not applicable to the Department of Chemistry.)

A diploma fee of *five dollars,* payable before Commencement in May, is charged all persons receiving degrees from the University.

Cost of Living

The cost of living in Roble Hall, including, board, room, light, heat, and attendance, averages about twenty-seven dollars per month. Students furnish their own linen, blankets, and towels. Requests for reservation of rooms should be made to the Matron of Roble Hall.

Rooms in Encina Hall, furnished similarly to those in Roble Hall, but without board, cost from $6.00 to $6.50 per month, with two in a room. There are a few single rooms at $8.00 per month. Students occupying a double room alone pay the full price of the room. Each double room is furnished with two single beds. Requests for reservation of rooms should be made to the Clerk of Encina Hall.

Students may live outside the Halls only in places approved by the University.

In Palo Alto and College Terrace, at an average distance of a mile and a quarter from the University, rooms and board, in private houses, can be obtained, at from twenty-five to thirty dollars per month. A considerable number of students live in co-operative clubs, in which the cost of board and room is reduced as low as eighteen dollars per month; such rooms are lighted and heated, but usually unfurnished. Special commutation tickets are issued by the Southern Pacific Company, and students living in towns on the line of the railway, from San Francisco to San Jose, easily go to and from the University daily. There is also trolley connection with San Jose, Los Gatos, and intermediate towns.

On arriving at the University, new students may obtain information of rooms and board at the Information Bureau conducted by the Christian Associations. A complete list of approved rooms and boarding places is printed in August. Particular inquiries may be addressed to the secretaries of the Christian Associations.

The University Inn, located near the Quadrangle, has dining accommodations for about three hundred students.

Books and stationery will average from eighteen to twenty-five dollars per year.

The necessary expenses of the student, exclusive of clothing and railway fares, range from $300 to $450 per year.

Self-Support of Students

A considerable number of students manage, in one way or another, to earn the whole or a part of their expenses while attending the University. Such opportunities occur in the line of office and laboratory assistance, personal services of numerous kinds, the management of various student enterprises, agencies for laundries, etc.

The Student Employment Bureau (in charge of the Christian Associations) registers without charge all students who apply for employment, and supplies employers with student labor as demanded. In general, the demand and supply are nearly equal, but the attention of new students who intend to earn the whole or part of their living is called to the following results of past experience:

1. There is a constant *over-supply* of those wishing to do teaching and clerical work. None but those having superior qualifications and experience are likely to secure employment the first semester.

2. There is a considerable demand for efficient stenographers, also for men and especially women students who can do domestic labor of any kind; board and room rent may be earned by waiting on table, washing dishes, general housework, house cleaning, gardening, etc.

3. Students who can do any kind of domestic or manual labor *well*, and who have thoroughly good health, can earn their board by three hours' work per day, or board and room by four hours' work per day. Those who are bookbinders, printers, mechanics, or carpenters, will have a decided advantage in obtaining employment. *But no student should come to the University without resources sufficient for the expenses of one semester.*

4. The University curriculum is adapted to those who have control of their entire time for study. The student who must earn his living, therefore, should expect to take less than the usual amount of University work.

5. No student should come expecting to earn money, who can do nothing well; skill is absolutely essential, as competition is quite as severe in the college community as elsewhere.

6. Opportunities for earning money during the summer vacations can usually be counted on, the demand for canvassers being most constant.

Particular inquiries concerning opportunities for self-support should be addressed to the Secretaries of the Y. M. C. A. or Y. W. C. A. Upon arrival at the University new students should report for registration and information to the Information Bureau of the Associations.

University Health Control

The University exercises an advisory control over student health affairs through the Committee on Public Health.

Every student upon entering the University is required to report for a brief medical examination. General health, eyesight, hearing, and evidence of effective vaccination are the important factors in the examination. Any condition which may place a limitation on the amount or kind of work planned by the student is discussed with him or made the subject of a report to his major department or to the Committee on Registration.

Students intending to train for any of the athletic teams, or to register for gymnasium work, are required to pass a careful physical and medical examination at the beginning of each semester.

A careful inspection of all boarding and rooming houses in the community is carried on under the supervision of the Public Health Committee, and only those are permitted to register who arrange to live in houses which have been approved.

Regulations concerning Vaccination.— (1) Each student will be required to present, for purposes of record, a dated statement, signed by a physician in good standing, certifying to his or her last successful vaccination. Such certificates will be returned, upon request, after incorporation into the University records. Inspection of the scar by the University authorities may be required. (2) A history of previous vaccinations is requested, but need not be in the form of a signed certificate. (3) Revaccination will be required of all those not successfully vaccinated within seven years. (4) Unsuccessful vaccination must be followed by a second trial within two weeks. (5) Should the disease at any time appear at or in the vicinity of the University, vaccination must be performed immediately on all those directly exposed who have not been successfully vaccinated within one year. Should the disease become prevalent, vaccination of all members of the University community not successfully vaccinated within one year, must be performed.

Students' Guild

The Guild is a student organization which seeks to make provision for the care of all cases of serious illness among its members. This is now accomplished for non-contagious diseases, through an arrangement with the Peninsula Hospital of Palo Alto. For the care of contagious diseases, no adequate provision has yet been made. A detention hospital is urgently needed and should be erected on the University campus. The Guild has not as yet succeeded in securing an available site, and for the present is compelled to limit its responsibility in contagious cases to a specified amount of financial aid.

All students are required to become members of the Guild by paying the fee, which is two dollars each semester. A uniform hospital rate of one dollar per day is charged all members of the Guild, in addition to such special charges as may be incurred for extra service.

The officers of the Guild for 1911-12 are as follows: President, Edward Guilford Cary, '11; Vice-President, Felita Mary Smith, '12; Secretary, Herbert Eustice White, '11; Treasurer, Frank Kenneth Pomeroy, '11; Wilbur Ray Chandler, '13; Professors Zinsser, Mitchell, and Stoltenberg, and Frank Kenneth Pomeroy, '11.

GRADUATION

Candidates may present themselves for graduation in January, May, and September.

No degree will be conferred upon any person who has not spent at least one year in resident study at the University. No honorary degrees are given.

Bachelor of Arts

The degree of Bachelor of Arts (A. B.) is conferred upon candidates who have satisfactorily completed a total of one hundred and twenty units of University work and who have also satisfied the requirements in major and minor subjects.

Thirty units constitute a normal year's work (see p. 65), but the ordinary class divisions (freshman, sophomore, junior, senior) are not recognized by the University. The degree is conferred whenever the requirements are met, without regard to the time spent, except that at least thirty units (including the last fifteen) must be completed in this University.

Each student selects as a Major Subject the work of some one Department. The Major Department has the authority to prescribe not more than forty units in the Major Subject (exclusive of elementary courses in the Major Department which may be offered for entrance). The Major Department shall also recommend such other courses as it may consider desirable, and shall exercise an advisory supervision over the student's entire curriculum from semester to semester. Major Department supervision of the student's study lists shall be administered in the spirit of the major subject system, which is to provide the inexperienced student with necessary advice and direction while developing his power of initiative, and to accord to the mature student larger and larger responsibility in planning his own curriculum. It shall be considered a general principle of university policy, to be departed from only in exceptional cases, that at least sixty of the one hundred and twenty units required for the degree be taken outside of the Major Department.

In applied science the Major Department may prescribe so much of the entire one hundred and twenty units as it shall deem essential to the technical or professional requirements of the major subject.

A course in English Composition (English A) is prescribed for first-year undergraduates who do not satisfy the matriculation test.

Within these limitations the work in all departments is elective, and the student may freely choose any course which his previous studies have prepared him to undertake.

The recommendation of the Major Department is necessary to graduation.

(A student in regular undergraduate standing who does not intend to become a candidate for the A. B. degree, may choose, with the approval of the major department, any courses in the University which his previous training has prepared him to undertake.)

Bachelor of Laws

The degree of Bachelor of Laws (LL. B.) is conferred upon candidates who have satisfactorily completed two years (sixty units) of non-professional study in the pre-legal curriculum and three years of professional study in the law school.

Candidacy for Advanced Degrees

Candidates must be registered in the University and must file a statement of their candidacy with the Registrar. The approval of a programme of study by the Department Faculty concerned and by the Committee on Graduate Study constitutes formal admission to candidacy. Only under exceptional circumstances will a programme of work be approved which is received later than the beginning of the academic year in which the degree is to be taken. It is advisable that such programme be filed as early as possible in the student's course. No advanced degree will be conferred except upon the recommendation of the Committee on Graduate Study.

Master of Arts

The degree of Master of Arts (A. M.) is conferred on graduates of this University, and on others who have had an equivalent training elsewhere, upon the satisfactory completion in residence, of one year of work beyond the baccalaureate requirements of the department in which the degree is sought, and upon the presentation of an approved thesis, and the passing of such general or final examination as the major department may require. A longer period of residence will be required of candidates who are inadequately prepared or who devote less

than the normal amount of time to their graduate course. Work may be done in connection with the regular courses of instruction or, as research, independently of them. The programme of study must form a consistent plan of work pursued with some definite aim, whether it lies wholly in a single department or field of study, or in more than one. At least two-thirds of a year's work must be devoted to advanced or graduate work in the major study or in intimately allied subjects.

Special regulations are:

1. A report upon the character of the work done shall be made by each instructor under whom a candidate is registered.

2. A candidate for the degree of Master of Arts must display ability to do independent work.

3. The Master's thesis, bearing the approval of the instructor under whose supervision it was prepared, must be submitted to the Committee on Graduate Study by the date on which instruction closes for the semester in which the degree is taken; upon acceptance, it shall be suitably bound and placed in the University Library.

Engineer

In the department of applied science the professional degree of Engineer is conferred on graduates of this University, and on others who have had an equivalent training elsewhere, upon the satisfactory completion, in residence, of one year of professional study beyond the baccalaureate requirements of the department in which the degree is sought, and upon the presentation of an approved thesis, showing ability to do independent work. The special regulations stated above for the degree of Master of Arts apply also to the degree of Engineer.

Juris Doctor

The degree of Juris Doctor (J. D.) is conferred on students who have previously received the academic degree of Bachelor of Arts, or an equivalent degree elsewhere, upon the completion of the three years' professional law course. The first year of the professional law course may be taken by candidates for the A. B. degree.

Doctor of Medicine

The degree of Doctor of Medicine (M. D.) is conferred on students who complete the four years' course in Medicine based upon a three years' pre-medical course as laid down by the University.

Doctor of Philosophy

The degree of Doctor of Philosophy (Ph. D.) is conferred on graduates of this University, and on others who have had an equivalent training elsewhere, upon the satisfactory completion of at least three years of graduate work, beyond the baccalaureate requirements of the department in which the degree is sought, under the following conditions:

1. At least the last year of study must be spent in residence at this University.

2. At least one year prior to the date when the degree is sought, the candidate must show a reading knowledge of French and German in his special literature. The faculty of the department in which the major work is taken determines whether this requirement has been met.

3. The programme of study must include one major subject and one or two minors. The minor subject or subjects shall represent approximately one-third of the programme of study; except that such minor subjects may be waived upon the recommendation of the major subject department, if approved by the Committee on Graduate Study, when the breadth and extent of the candidate's training justify such a course,—in which case the candidate will be expected to show such breadth of training in his oral examination.

4. The candidate must present a thesis at least six weeks before the close of the semester in which the degree is sought, in form and content acceptable to his department and to the Committee on Graduate Study. He must guarantee the printing of the thesis within one year after the degree is conferred and the deposit of one hundred copies in the Library.

5. In addition to satisfying the requirements of major and minor departments, the candidate must submit to an oral test or examination by a special examining committee of the Faculty and in the presence of such other members of the Faculty as care to attend. The special examining committee consists of (1) the professors of the major-subject department with the executive head of that department acting as chairman, (2) the one or more professors in charge of the minor subject or subjects, (3) two members of the Committee on Graduate Study whose departments lie nearest that of the major professor, and (4) the Chairman of the Committee on Graduate Study, acting as its secretary. The Committee may at its discretion invite other members of the Faculty to participate in the oral examination.

Advanced Degrees in the Medical Department

The Divisions of the Medical Department are considered as equivalent to other departments of the University in respect to candidacy and requirements for the degrees of Master of Arts and Doctor of Philosophy, and all the foregoing regulations apply to these divisions and division faculties as to departments and department faculties, with the following modifications and limitations:

1. Candidates for these degrees must have received the degree of A. B. at Stanford, or an equivalent degree elsewhere, and must have completed all requirements for admission to the Department of Medicine, and such other requirements as each division faculty may prescribe.

2. Time spent in candidacy for the degree of Master of Arts or Doctor of Philosophy will not be counted toward the degree of Doctor of Medicine.

3. Candidates for these degrees in the divisions of Medicine, Surgery, and Obstetrics and Gynecology, must have received the degree of Doctor of Medicine.

The High School Teacher's Certificate

County, and City and County Boards of Education are authorized to grant High School Certificates (under Sections 1521, 1775, and 1792 of the Political Code of California) to candidates recommended by the University as having fulfilled the requirements laid down by the State Board of Education, and provided the institutions concerned "shall each certify to the high character of the work accomplished under its direction, and to the personal fitness of the candidate."

The requirements laid down by the State Board of Education will be met by accomplishing the work outlined in either of the following groups:

Group I

1. Graduation from a college requiring not less than eight years of high school and college training.

2. One year of graduate study in a university accredited by the California State Board of Education, part of the time at least being devoted to one or more of the subjects taught in the high school.

(The "year of graduate study" at Stanford will be fulfilled (*a*) when the candidate has received the degree of Master of Arts, or (*b*) when the candidate has completed twenty-six units of university work (four of which may be the practice teaching named below). At least

one advanced or graduate course in the major department of not less than four units, must be taken.)

3. Eight hours per week for one-half school year in the Department of Education, taken as a part of either the graduate or undergraduate course.

4. Practical teaching, equivalent to at least four hours per week for one-half school year, in a well-equipped school of secondary grade directed by the Department of Education of any of the accredited universities, or in a school of grammar or secondary grade in connection with a California State Normal School, or under the direction of the Department of Education of the University of California, or of the Leland Stanford Junior University.

Group II

1. Graduation from a college requiring not less than eight years of high school and college training.

2. One-half year of graduate study in a university accredited by the California State Board of Education, part of the time at least being devoted to one or more of the subjects taught in the high school.

(The "half year of graduate study" at Stanford will be interpreted as thirteen units of university work, including one advanced or graduate course in the major department of not less than two units.)

3. (*a*) Graduation from a California State Normal School or other normal school officially recognized by the State Board of Education as of equivalent rank, *or* (*b*) twenty months' experience with decided success as a regular teacher or as principal in any reputable school, elementary or secondary; *or* (*c*) six months as student teacher in a well-equipped school of secondary grade directed by a California State Normal School, or its recognized equivalent, or in a school of grammar or secondary grade in connection with a California State Normal, or under the direction of the Department of Education of the University of California, or of the Leland Stanford Junior University.

The University Recommendation

In addition to the technical requirements prescribed by the State Board of Education the University will require, as preliminary to any recommendation for the high school teacher's certificate, the completion of enough work (and of sufficiently high grade), in at least one subject, to secure a Department recommendation that the candidate is fitted to teach the subject in high school classes.

The Department requirements for such recommendation are, in most cases, stated in the Register under the Department headings; but each candidate *should find out definitely* from the Departments concerned, not later than the beginning of the Senior year, preferably earlier, the particular requirements which must be met.

It is advisable that every candidate for the teacher's recommendation should endeavor to fulfil the Department requirements in at least *two* high school subjects.

For information and advice as to possible and desirable combinations of subjects for high school positions, students are invited to consult the Appointment Secretary as early in their course as possible.

The Grammar School Teacher's Certificate

Under Section 1775 of the Political Code of California, as amended March, 1909, County Boards of Education are authorized to grant, without examination, grammar school certificates "to holders of diplomas of graduation of the four-year course of the University of California or Leland Stanford Junior University when said holder of such diploma shall have had six months' training in one of the State Normal Schools of this State or has had eight months' successful experience in teaching in the public schools of California after graduation."

Under Section 1543 of the Political Code of California, as amended March, 1909, County Superintendents of Schools are authorized "to issue temporary elementary certificates valid for two years to graduates of the University of California and to graduates of the Leland Stanford Junior University"; but "no person shall be entitled to receive a temporary certificate more than once in the same county."

Appointment Registry

The University endeavors (1) to keep a record of students and graduates who wish to teach, or to be transferred to other teaching positions, and (2) upon application of school and college officials, to recommend for suitable vacancies such candidates as seem most likely to succeed.

The University aims to obtain complete information with regard to the scholarship, experience, and personal qualifications of each candidate, and reports from instructors and others concerning the fitness of candidates are filed in the office of the Appointment Secretary. Such information is regarded as confidential, and general letters of recom-

mendation are not given. Copies of such credentials as are on file will be mailed to school and college officials, at their request, or at the request of the candidate concerned. But the University reserves the right of refusing to extend its coöperation to students when they apply for positions for which they are manifestly unfit. Official recommendations for positions are made only upon request of those in authority. Letters requesting such recommendations should state explicity the subjects to be taught, the salary to be paid per year, and the time when the engagement is to begin.

While the services of the Office have been called for mainly in connection with school and college positions, there is an increasing number of requisites for persons in other types of employment—stenographers secretaries, librarians, bacteriologists, social and playground workers, and the like. The Office has therefore undertaken to collect information regarding the vocational training and experience of such students as may desire to register with the Committee.

Blanks for registration may be obtained of the Appointment Secretary, at the Registrar's office, and should be filled out each year, preferably during March or April.

Communications should be addressed to the Appointment Secretary, Stanford University, California.

COURSES OF INSTRUCTION

GREEK

Augustus Taber Murray, Professor.
Ernest Whitney Martin, Associate Professor.
Philip Arnold Knowlton, Instructor (Latin and Greek).
Blanch Rible, Dorothy Elizabeth Singer, Assistants.

Undergraduate Courses

Instruction in the lower classes is given chiefly by means of recitations, but as the student advances these are supplemented by lectures. In courses 1, 2, 3, 13, and 14 the work is arranged so as to provide as far as possible individual instruction for each student. In this way it has been found possible to read more widely, while at the same time there is a distinct gain in thoroughness.

It will be seen that provision is made for those who have had no Greek before coming to the University.

The Teacher's Recommendation.—Courses 2, 3, 4, 5, and 15 (or equivalents) constitute the minimum requirement for the high school teacher's recommendation in Greek.

1. Elementary.—Grammar; translation of easy prose; Greek composition. After the essential grammatical forms have been mastered, passages of continuous prose are taken up for translation, and, as soon as is practicable, the Anabasis. The student is made familiar with the ordinary forms of syntax, and exercises in writing Greek are regularly introduced. This course does not count as a part of the major work for students in Greek.

3 units, both semesters (Martin)

2. Xenophon and Plato.—Selections from Xenophon's Hellenica, with Plato's Apology and Crito. Open to those who have offered subject 22 on entrance, or who have completed course 1 in the University. In this course each student meets regularly with one of the instructors for direct personal instruction adapted to his particular needs. 3 units, 1st semester (Martin, Knowlton)

3. The Odyssey and Herodotus.—A continuation of course 2. Selections from the Odyssey. 3 units, 2d semester (Murray)

4. Prose Composition and Sight Translation.—Simple prose is taken up for sight-reading, and the exercises are based upon the text read. Required of Greek major students in connection with courses 2 and 3. 2 units, both semesters (MARTIN)

5. Homer.—The reading of large portions of the Iliad, with discussions of Homeric problems from time to time. Open to students who have completed courses 2 and 3, or an equivalent.
3 units, 1st semester (MARTIN)

6. Euripides, Lucian, etc.—The Alcestis of Euripides, selections from Lucian, and selections from the Lyric Poets. A continuation of course 5. 3 units, 2d semester (MARTIN)

7. Advanced Prose Composition.—Further training in the writing of Greek, with exercises in translation at sight supplemented by syntactical studies. 2 units, both semesters (MURRAY)

8. Greek Sculpture.—Lectures, illustrated by stereopticon. Not open to first-year students.
2 units, 1st semester (MURRAY)

11. Greek Tragedy.—Prometheus Bound, Antigone, Hippolytus, and Agamemnon read and interpreted, with lectures on Greek dramatic art from to time. Other plays assigned to be read in translation.
3 units, both semesters (MURRAY)

12. Greek Testament.—A study of the Gospels and Acts with lectures on the problems involved.
2 units, 2d semester (KNOWLTON)

13. Rapid Reading.—The student and instructor meet weekly for individual reading in easy Greek, suited to the student's particular needs. Open to all who have had at least one semester of Elementary Greek. 1 to 3 units, both semesters
(MURRAY, MARTIN, KNOWLTON, RIBLE, SINGER)

14. Introductory.—An introduction to the study of the Greek language leading up to the reading of easy prose. Simple exercises in the writing of Greek are regularly introduced.
3 units, 2d semester (MURRAY)

GRADUATE COURSES

The center of the Graduate work is the Greek Seminary—made up of the director and such students as satisfy him of their fitness for the work. The Seminary meets weekly for the critical interpretation of

some Greek author, the different members, in turn, filling the post of interpreter. Topics for investigation are assigned, and papers prepared by the members are read and discussed.

Members of the Seminary are expected to supplement their critical work by wide reading, and lectures on the author or authors under discussion are given by the director. It is in the highest degree desirable that all members of the Seminary should be able to read both French and German.

16. The Greek Seminary.—In 1911-12 the Seminary was occupied with the study of Homer. The Iliad was read in its entirety in the reading course accompanying the Seminary, and in the Seminary sessions select portions of the poem were taken up for critical study. These were for the most part passages of the highest importance in the study of the poem as a whole. Lectures on the structure of the Iliad, and on Homeric civilization were given by the director in connection with the work of the Seminary.

4 to 6 units, both semesters (MURRAY)

17. Rapid Reading.—Graduate and advanced students met weekly for the reading of Homer.

4 units, both semesters (MURRAY)

SPECIAL LECTURES

Throughout the year Professor MURRAY gives lectures, twice weekly, on Greek Epic and Dramatic Poetry. These lectures are intended for general literary students, and do not presuppose a knowledge of Greek; they do not count as part of the major work for students in Greek. The courses are not open to incoming freshmen.

18. The Greek Epic.— 2 units, 1st semester (MURRAY)
19. Greek Tragedy.— 2 units, 2d semester (MURRAY)

LATIN

HENRY RUSHTON FAIRCLOUGH, Professor.
JEFFERSON ELMORE, BENJAMIN OLIVER FOSTER, Associate Professors.
PHILIP ARNOLD KNOWLTON, Instructor.
RUTH WENTWORTH BROWN, EDITH FLORENCE GRUNDY, Assistants.

[With the co-operation of the Greek Department, and of Professor HEMPL of the Department of Germanic Languages.]

Undergraduate Courses

The aim of the undergraduate courses in Latin is to give the student a somewhat systematic knowledge of the language and its development, an acquaintance with the representative authors of Latin literature, and some insight into the life, culture, and civilization of ancient Rome.

The Department recognizes two classes of major students: (1) those who wish to pursue a course of liberal studies, including Latin as a prominent feature; (2) those who, expecting to teach Latin, desire to be properly equipped for that purpose.

Students who wish to qualify for teaching Latin must take courses 2, 4, 5, 6, 7, 8, 9, and 17, together with such other courses as are recommended by the Department. To other students more freedom of choice is allowed.

1a. Introductory.—After a sufficient knowledge of the forms and elements of syntax is acquired the time is devoted mainly to the reading of easy prose. Attention is also given to word formation and the derivation of technical terms. The course is given primarily for scientific and other students who desire at least one year of Latin and for those who wish to begin the subject with a view to further study.

3 units, both semesters (Elmore)

1. Virgil and Cicero.—Virgil, selected books of the Æneid; Cicero, selected orations. This course is planned for those who have passed in 1*a* or entrance subject 21*a*.

3 units, both semesters (Elmore)

2. Terence, Cicero, and Horace.—Terence, Andria; Cicero, De Senectute; Horace, Odes and Epodes; selections from Catullus. Open in either semester to students who have completed course 1, or who have offered entrance subject 21*b*. Two sections.

3 units, both semesters (Fairclough, Foster, Elmore)

3. Justinian.—The Institutes of Justinian are read both as a training in language and as an introduction to some conceptions of Roman law. Open to Latin and Pre-Legal majors who have had three years of Latin.

2 units, both semesters (Knowlton)

4. Prose Composition I.—Practical exercises and rapid reading of easy prose. Open in either semester to first-year students.

2 units both semesters (Foster)

5. **Horace.**—Satires and Epistles. Open to those who have completed course 2 or 3, or an equivalent. Attention is directed especially to the style and subject matter, to Horace's influence on later literature, and to the salient features of the Augustan age.

3 units, 2d semester (FAIRCLOUGH)

6. **Livy and Tacitus.**—Selections from Livy's History and the Annals of Tacitus. This course, complementary to course 5, involves a survey of Roman history and the literature of the early empire.

3 units, 1st semester (FAIRCLOUGH)

7. **Prose Composition II.**—Open to students who have taken course 4, or an equivalent.

2 units, both semesters (ELMORE, KNOWLTON)

7a. **Practical Exercises** in the oral use of Latin; conversation, reading aloud, memorizing, etc. Two meetings a week, for which one hour of credit is given. Open to all but first-year students.

1 unit, 2d semester (FOSTER)

8. **Roman Comedy.**—The Trinummus of Plautus and the Phormio and Adelphoe of Terence. Attention is paid to early forms, constructions, and meters, and to the staging of a Roman play, with some consideration of the differences in style and dramatic art between the two playwrights. 3 units, 1st semester (FOSTER)

9. **The Letters of Cicero.**—Selections from the correspondence are read with a view to obtaining a conception of Cicero's character as a man and to becoming acquainted, as far as possible, with the social and political conditions of the time.

2 units, 2d semester (ELMORE)

10. **Petronius.**—The Cena Trimalchionis and selections.

2 units, 1st semester (KNOWLTON)

12. **Lucretius.**—Selections from the De Rerum Natura are read with particular attention to the philosophic thought and its poetic treatment. 3 units, 2d semester (KNOWLTON)

13. **Prose Composition III.**—A course for advanced students.

1 unit, both semesters (FAIRCLOUGH, FOSTER)

14. **Juvenal and Martial.**—Selections from the Satires of Juvenal and the Epigrams of Martial, with supplementary reading in other writers of the first century.

2 units, 1st semester (FOSTER)

15. Christian Latin.—Selections from Minucius Felix and other Christian literature will be read.

2 units, 2d semester (MARTIN)

17. Teachers' Course.—Lectures on methods of teaching Latin, with practical exercises. Open only to advanced students.

2 units, 1st semester (ELMORE)

18. Mediaeval Latin.—The reading will be based on Benedict's *Regula Monachorum,* selections from Gregory of Tours, Einhard's *Vita Caroli Magni,* and selected English charters. The course is designed primarily for students of history and is open to all who have had four years of preparatory Latin or an equivalent.

3 units, 1st semester (MARTIN)

19. Roman History from the Sources.—Livy's third decade—the war with Hannibal. Large portions of the text will be read in class; other parts will be assigned for private reading and report.

3 units, 2d semester (FOSTER)

GRADUATE COURSES

These courses are open to graduates in Latin who have had at least two years' undergraduate work in Greek. The ability to read French and German is also very desirable, and, in the case of candidates for the degree of Ph. D., necessary. The aim of the courses is to give the student a thorough grasp and detailed knowledge of particular authors, and of certain periods and fields of literary activity, as well as a training in literary criticism, and an acquaintance with the methods of original research.

22. Latin Seminary.—In 1911-12 the Seminary will be devoted to Virgil, especially the Bucolics and Æneid. The latter will be studied in its entirety as a work of art, and selected passages in the first six books will be interpreted. Attention will be paid to Virgil's influence on mediaeval and modern literature. The course will be of special importance to teachers of Latin. Students should provide themselves in advance with a complete text of Virgil, such as that in the Oxford or Teubner series. 2 to 6 units, both semesters (FAIRCLOUGH)

23. Roman Elegy.—Selections from the Corpus Tibullianum, Propertius, and Ovid, accompanied by lectures on the development of elegiac poetry among the Greeks and Romans. [Not given in 1911-12.]

2 units, 2d semester (FOSTER)

25. Introduction to Latin Epigraphy.—Lectures with studies in the Corpus. Inscriptionum. 1 unit, 1st semester (MARTIN)

26. Historical Grammar.—Lectures on the Latin sounds and forms. 2 units, 1st semester (FOSTER)

27. Venetic.—Lectures on Venetic and neighboring dialects. [Not given in 1911-12.] 2 units, 1st semester (HEMPL)

28. Etruscan.—Lectures on the nature of the language and its relation to other Italic dialects. [Not given in 1911-12.] 2 units, 2d semester (HEMPL)

SPECIAL COURSES

29. History of Rome.—A general course, open to all students. 3 units, 2d semester (ELMORE)

31. Roman Art and Monuments.—A survey of the topography, architecture, sculpture, and other art-forms of ancient Rome and the provinces, illustrated with lantern-slides. This course is intended mainly for major students in Latin, Greek, History, and Art. Others must receive special permission from the instructor before registering. 2 units, 2d semester (FAIRCLOUGH)

32. Roman Private Life.—Lectures, illustrated with lantern-slides from ancient art and other sources. Open to all, but of special importance to Latin students. 2 units, 1st semester (KNOWLTON)

GERMANIC LANGUAGES

GEORGE HEMPL, JAMES OWEN GRIFFIN, Professors.
KARL G. RENDTORFF, WILLIAM ALPHA COOPER, †MACY MILLMORE SKINNER, Associate Professors.
BRUNO BOEZINGER, HERMAN JOHANN HILMER, Assistant Professors.
GEORGE WILLIAM HAUSCHILD, Acting Assistant Professor.
ANETTA HAFFNER HILMER, Assistant.

The advanced courses are intended primarily for those students who are candidates for the degrees of Master of Arts and Doctor of Philosophy; but special consideration is also given to the needs of those who intend to make the teaching of German their profession. Graduate work in the Germanic languages is facilitated by the opportunities offered by the library of the late Professor Hildebrand of

†Absent on leave, 1911-12.

Leipzig, which contains a rich and well-chosen collection of works on German philology and literature.

The attention of all students of German is called to the course in the history of Germany, given as course 12 in the Department of History. This course should be taken as early as possible.

Students who intend to teach German are expected to take at least courses 3, 6, 7, 8, 13*b*, 14, 16, 22, and either 9, 10, or 11. It is important that the student heed in time what is said in the notes to courses 2 and 13, and the note above course 9.

1. **Elementary.**—It is the object of this course to put the learner in possession of the elements of the German language. This implies: (1) a personal command of simple German, that is, the ability to understand such German whether heard or read, and to employ the language in simple conversation, narration, and description, both orally and in writing; (2) such a ready familiarity with the elements of German grammar as is essential for the attainment of this command of the language.

5 units, both semesters (COOPER, HILMER, HAUSCHILD)

2. **Second-year German.**—(See note below.)

a. Reading.—Texts suitable for the second year; for the most part, the writings of contemporary authors.

3 units, both semesters

(HEMPL, GRIFFIN, H. HILMER, HAUSCHILD, A. HILMER)

aa. Scientific Reading.—Texts selected with a view to preparing scientific students to read technical literature.

3 units, both semesters (BOEZINGER)

b. Reproduction and Production, oral and written.—The work of this course is intended to assist the pupil in getting a personal command of German, both spoken and written; with it is correlated a thorough review of the elements of the grammar.

2 units, both semesters (GRIFFIN, BOEZINGER, HAUSCHILD)

Note.—Students expecting to continue the study of German beyond the second year are supposed to have completed both 2*a* and 2*b* or an equivalent.

3. **Classical German Drama.**—This course aims chiefly to be an introduction to the spirit of the classical German drama; but throughout the course an effort is also made to familiarize the student, by means of various selected readings, with the life and character of the German people. 3 units, both semesters (GRIFFIN, RENDTORFF)

4. **Modern German Drama.**—Lectures in connection with the interpretation and rapid reading of some of the more important works of the modern dramatists. 2 units, both semesters (GRIFFIN)

5. **Modern German Novels.**—The reading of standard modern novels, with lectures on the development of the novel.
2 units, both semesters (HAUSCHILD)

6. **Advanced German Grammar.**—A systematic presentation of the important facts of German grammar, together with individual investigations of the usage of various writers.
2 units, both semesters (HEMPL)

7. **German Composition.**—By composition is meant, not translation from English, but practice in putting one's thoughts into acceptable written German.
2 units, both semesters (BOEZINGER, HILMER)

8. **Advanced Composition.**—
2 units, both semesters (BOEZINGER)

Note.—Students wishing to take up any of the three following courses (9, 10, 11) will be expected to have such preparation as can be obtained by pursuing courses 3 and either 4 or 5.

9. **Lessing.**—Lectures on Lessing's life and times, with reading and discussion of his principal works. [Not given in 1911-12.]
3 units, both semesters (———)

10. **Schiller.**—Lectures on his life, together with interpretation and discussion of his writings.
2 units, both semesters (COOPER)

Note.—Course 10 is usually given three times a week by Professor SKINNER; during his absence it will be given twice a week by Professor COOPER.

11. **Goethe.**—

a. Lectures on Goethe's life and works, and reading of selected works. [Not given in 1911-12.]
3 units, both semesters (COOPER)

b. Goethe's Faust: Urfaust, Fragment of 1790, Part First and Part Second. 3 units, both semesters (COOPER)

11c. **Seminary.**—Goethe's Tasso.
2 units, 2d semester (COOPER)

13. **The History of German Literature.**—Lectures and readings.

a. From the earliest times to the eighteenth century. [Not given in 1911-12.] 2 units, both semesters (RENDTORFF)

b. The eighteenth and nineteenth centuries.

2 units, both semesters (RENDTORFF)

Note.—Students electing course 13 are expected to have pursued a general course in the history of English literature and to be able to read German with facility.

14. Teachers' Course.—Lectures on the various methods employed in teaching modern languages, together with practical advice in the matter of conducting classes.

2 units, 2d semester (HEMPL)

15. The Genesis of Grammar.—Lectures on the origin and development of the parts of speech and of other grammatical apparatus.

2 units, 1st semester (HEMPL)

16. Middle-High German.—Grammar and selected texts (first semester); Walter von der Vogelweide (second semester).

2 units, both semesters (RENDTORFF)

16b. Advanced Middle-High German.—[Not given in 1911-12.]

2 units, both semesters (RENDTORFF)

17. Old-High German.—[Not given in 1911-12.]

2 units, both semesters (BOEZINGER)

18. Old Norse.—[Not given in 1911-12.]

2 units, both semesters (HEMPL)

19. Gothic.—' 2 units, both semesters (BOEZINGER)

20. The Runes.—Lectures on the origin and development of primitive Germanic writing. [Not given in 1911-12.]

2 units, 1st semester (HEMPL)

21. The History of German Civilization.—This course is intended for students of German who wish to become acquainted with the development of German civilization in its relation to German literature.

2 units, both semesters (RENDTORFF)

22. The History of Germany.—[See course 12 in the Department of History, and the note at the beginning of this section, page 12.]

23. Thesis Course.—Special investigations and reports intended primarily to furnish undergraduates a training in preparation for original research work. Under the direction of the various members of the staff. Credit subject to individual adjustment.

[See also courses 27 and 28 in the Department of Latin.]

ROMANIC LANGUAGES

Oliver Martin Johnston, Colbert Searles, Associate Professors.
Clifford Gilmore Allen, Albert Léon Guérard, Aurelio Macedonio Espinosa, Assistant Professors.
Robert Edouard Pellissier, Instructor.

The undergraduate courses in the Romanic Languages are planned so as to give students an intimate acquaintance with the modern forms of the languages spoken in the principal neo-latin countries. To this end systematic attention is paid to pronunciation, reading, syntax, and conversation. In the higher courses special emphasis is laid on the study of literature. In order to give students an opportunity to become familiar with the spoken idioms, several of the advanced courses are conducted as much as possible in the language which forms the object of study.

The Department recognizes two classes of major students: (1) students who expect to teach French or Spanish and who wish to take up the study from the point of view of the specialist; (2) students who desire to group a course of study of a general nature around that of French or Spanish.

Either French or Spanish may be selected as a major subject. In French the minimum requirement consists of courses 2, 3, 4, 5, 6, 7, 8, 9, 10, and 11. In Spanish the same requirement includes courses 13, 14, 15, 16, 17, 18, and 20.

In addition major students who intend to teach either French or Spanish will be expected to take Latin 1, 2, and 4, German 1 and 2, and Elementary French or Spanish or Italian.

The Teacher's Recommendation.—The minimum requirement for the High School recommendation is as follows: In French—courses 2, 3, 4, 6, 7, and 8; in Spanish—courses 13, 14, 15, 16, 17, 18, 20. The Department will insist also on courses 24 and 25. Recommendations will be given only on the vote of the Department, and will demand a degree of scholarship above the ordinary passing mark.

1a. Elementary French.—Fraser and Squair, French Grammar, with written and oral exercises and systematic training in French pronunciation on the basis of Matzke's Primer of French Pronunciation; Aldrich and Foster's French Reader.

3 units, both semesters (Pellissier)

1b. Elementary French, Reading Course.—The course is intended for students who merely desire to obtain a reading knowledge

of the language. Aldrich and Foster, Foundations of French; Aldrich and Foster's French Reader; Mérimée, Colomba.

3 units, both semesters (PELLISSIER)

[Courses 1*a* and 1*b* are continuous courses, open to all, but students desiring to enter after the end of the second week will be admitted only upon special examination.]

2. Second-Year French Composition.—The course will be conducted as far as practicable like the corresponding course in English composition. A limited amount of daily grammatical exercises based on the second part of Fraser and Squair's French Grammar will supplement this work in original composition. Open to students who have completed course 1*a*, or who have received credit for entrance subject 19*a*.

2 units, both semesters (SEARLES)

3. Modern French Reading.—Translation of selected texts in prose and verse. Open to students who have completed course 1*a* or course 1*b*, or who have received credit for entrance subject 19*a*.

2 units, both semesters (GUÉRARD, PELLISSIER)

4a. French Conversation.—There are three meetings of the class during the week, for which one unit of credit is given toward graduation. Open to students who have completed course 1*a*, or who have received credit for entrance subject 19*a*.

1 unit, both semesters (GUÉRARD)

4b. French Pronunciation.—Practice in French pronunciation with the phonograph, required for one semester of all students registering for course 4*a*, unless excused by the instructor, and open to others likely to profit by such practice as far as the limitations of time and space will permit. One class exercise and two practice hours each week.

1 unit, either semester (SEARLES)

[Courses 2, 3, and 4 constitute the second year's work in French, and should, if possible, be taken during the same year. Course 4 may not precede course 2.]

5. Reading and Writing of French.—Vreeland and Koren, French Syntax and Composition. An intermediate course in reading and composition intended primarily for students entering with entrance subjects 19*b* or 19*c*.

3 units, both semesters (GUÉRARD)

6. Advanced French Prose Composition.—Translation into French of selected English prose. Open to students who have completed course 2 or course 5.

2 units, both semesters (GUÉRARD)

7. **Outline Course in the History of French Literature.**—Lectures, supplemented by reading and reports by the members of the class. Not open to Freshmen. Prerequisite: course 3 or course 5.
3 units, both semesters (SEARLES)

8. **Classical French.**—A study of the principal authors of the classical period. Representative texts will be read from the works of Corneille, Racine, Molière, Voltaire, Le Sage, La Fontainè, and Boileau. Not open to Freshmen. Prerequisites: courses 2 and 3, or course 5, or their equivalent. 3 units, both semesters (SEARLES)

9. **History of French Literature in the Nineteenth Century.**—Lectures, with reading of the principal authors and reports by the members of the class. Open to students who have completed courses 7 or 8. 2 units, both semesters (SEARLES)

[With permission Juniors and Seniors in other departments may register for one unit of credit in course 9 and be excused from the supplementary reading.]

10. **Voltaire.**—His life, works, and influence. Lectures in French. The work required of French majors will also be in French. Open to students who have completed courses 2, 3, 4, or their equivalent.
2 units, 1st semester (GUÉRARD)

11. **Victor Hugo.**—A general introduction to his writings, with special stress on his later poetry. Lectures in French. The work required of French majors will also be in French. Open to students who have completed courses 2, 3, 4, or their equivalent.
2 units, 2d semester (GUÉRARD)

12. **The French Novel.**—From the beginning of the XVII Century to the Romantic movement. Lectures in French and reports on assigned reading. Prerequisites: French 2, 3, and 4*a*, or their equivalents
2 units, 2d semester (PELLISSIER)

13. **Elementary Spanish.**—Wagner, Spanish Grammar; Hills, Spanish Tales for Beginners; Echegaray, El Poder de la Impotencia. A continuous course open to all.
3 units, both semesters (ALLEN, ESPINOSA)

14. **Second-year Spanish Composition.**—Ramsey, A Text-book of Modern Spanish; Umphrey, Spanish Prose Composition. Open to students who have completed course 13, or who have received credit for entrance subject 18*a*. 2 units, both semesters (ALLEN)

15. Modern Spanish Reading.—Translation of selected texts in prose and verse. Open to students who have completed course 13 or who have received credit for entrance subject 18*a*.

2 units, both semesters (ESPINOSA)

16a. Spanish Conversation.—There are three meetings of the class during the week, for which one unit of credit is given. Open to students who have completed course 13, or its equivalent.

1 unit, both semesters (ESPINOSA)

16b. Spanish Pronunciation.—Practice in Spanish pronunciation with the phonograph is open to students likely to profit by such practice, as far as the limitations of time and space will permit.

1 unit, either semesters (ESPINOSA)

[Courses 14, 15, and 16 constitute the second year's work in Spanish, and should, if possible, be taken during the same year. Course 16 may not precede course 14.]

17. Advanced Spanish Composition.—Translation into Spanish of selected English prose. Open to students who have completed course 14, or its equivalent.

2 units, both semesters (ESPINOSA)

18. Classical Spanish.—A study of the principal authors of the classical period. Representative texts will be read of Cervantes, Lope de Vega, Calderón, Alarcón, Tirso de Molina, as well as selections from Ford's A Spanish Anthology. Open to students who have completed courses 14 and 15 or their equivalent.

2 units, both semesters (ALLEN)

19. Modern Spanish Drama.—A study of the development of the modern Spanish drama from the middle of the 18th century to the present time. Lectures, reports, and rapid reading of the more important works. Not open to first-year students.

2 units, both semesters (ESPINOSA)

20. Outline Course in the History of Spanish Literature.—Lectures with reading of important works and reports by the members of the class. Open to students who have completed course 18 or its equivalent. 2 units, both semesters (ALLEN)

21. Elementary Italian.—Gaffino, A New Grammar of the Italian Language; Bowen, First Italian Readings; Manzoni, I Promessi Sposi. A continuous course open to all.

3 units, both semesters (JOHNSTON)

22. **Advanced Italian.**—Dante, La Divina Commedia. Translation course open to students who have completed course 21. [Not given in 1911-12.] 2 units, both semesters (JOHNSTON)

23. **Dante and the Divine Comedy.**—Lectures open to Juniors and Seniors in all departments.
2 units, 2d semester (JOHNSTON)

[Course 22 alternates with course 23.]

24. **Phonetics.**—Lectures on the organs and the nature and formation of speech sounds with special reference to the pronunciation of French. Intended particularly for teachers of language. Open only to advanced students. 2 units, 1st semester (JOHNSTON)

25. **Teachers' Course in French.**—Lectures on methods of teaching French, study of the available text-books, and review of French grammar. Open only to advanced students. 1 unit, 2d semester

[Courses 24 and 25 are offered in alternate years; given in 1911-12.]

26. **Corneille.**—A study of Corneille and his theatre. Open to students who have completed course 7, or its equivalent.
3 units, 1st semester (JOHNSTON)

27. **Introduction to the Study of Old French.**—Reading of selected passages from Bartsch-Wiese, Chrestomathie de l'Ancien Français (Leipzig, Vogel, 1908), with a study of Old French Phonology and Morphology. 2 units, both semesters (JOHNSTON)

28. **French Historical Grammar.**—Lectures on Old French Phonology and Morphology. [Not given in 1911-12.]
2 units, both semesters (JOHNSTON)

29. **Old French Literature.**—Lectures on the history and development of Old French Literature. [Not given in 1911-12.]
2 units, 2d semester (JOHNSTON)

30. **Floire et Blancheflor.**—A translation of the two Old French poems on *Floire et Blancheflor*, with lectures on the origin and growth of the legend. [Not given in 1911-12.]
3 units, 2d semester (JOHNSTON)

31. **Journal Club.**—The instructors in the department and the advanced students meet regularly on alternate Fridays for the discussion of the periodicals and new books.

ESPERANTO

1. **Esperanto.**—A rapid but exhaustive study of the international language. Kellerman's Complete Grammar of Esperanto (Heath & Co.) will be used. Open to all. 1 unit, 1st semester (GUÉRARD)

ENGLISH LITERATURE AND RHETORIC

Alphonso Gerald Newcomer, Professor.

Samuel Swayze Seward, Jr., Howard Judson Hall, Lee Emerson Bassett, Henry David Gray, William Dinsmore Briggs, Everett Wallace Smith, Assistant Professors.

Theresa Peet Russell, Edith Ronald Mirrielees, Van Wyck Brooks, Instructors.

Elisabeth Lee Buckingham, Paul Jay Batkin, Acting Instructors.

Evelyn Wight Allan (Dean of Women).

Requirements for the Degree of Bachelor of Arts

a. The courses in Chaucer, Shakespeare, Milton (or Spenser or Wordsworth), History of English Literature (course 32 in the third year, and English Philology 3 in the fourth year), besides such preliminary courses in vocal training, composition, or literature as may be requisite in each individual case.

b. English History. Students entering credited with Entrance Subject 16 are considered as having fulfilled this requirement.

c. A sound knowledge of at least one foreign language and its literature—ordinarily interpreted as requiring a minimum of 16 units in the chosen language, not including Latin 1, German 1, or French 1.

In general, students are encouraged to include among their elected studies Latin or Greek (not less than two years; or, in case Latin or Greek be selected to meet requirement *c* above, one modern foreign language), Anglo-Saxon, and a course in science, with laboratory work. Students preparing for journalism may substitute for the more advanced courses in literature, courses in Advanced Composition, History, Economics, and Social Science.

The Teacher's Recommendation.—Recommendation for the Teacher's Certificate in English is granted only by vote of the department on the basis of approved scholarship, and upon the completion of a certain amount of prescribed work. The undergraduate courses to be usually prescribed are, in the Department of English Literature, Vocal Expression, Composition, Shakespeare, Milton, Teacher's Course, and one course in the history of literature, and, in the Department of English Philology, Anglo-Saxon and Chaucer. Graduate study shall be taken in accordance with the following regulation:

Graduate Study

A graduate student in the Department of English Literature is expected to take within the year at least twenty units in courses (of whatever department) recognized as of an advanced or graduate character; and of these at least four must be in English Literature and four in English Philology.

Advanced Degrees

The preliminary requirements for entrance upon a course for an advanced degree in English are:

a. The course for the degree of A. B. in English or its equivalent.

b. An elementary knowledge of Anglo-Saxon.

c. A sound knowledge of two foreign languages (preferably one ancient and one modern language).

A candidate for the Master's degree in English Literature must take in all at least twenty units of advanced or graduate courses, of which at least six must be in English Literature and six in English Philology. If a Master's thesis is registered as a part of the work of either or both semesters, it may be credited (according to the judgment of the instructor under whose guidance it is being written) to the amount of three to five units a semester; but not more than four of such units in the year may apply toward the twelve units required in the two departments.

Preliminary and General Courses

(*Open to all students unless otherwise specified.*)

A. Elementary Composition.—A one-semester course required of all first-year undergraduates except those who show themselves entitled to exemption.

1 unit, either semester (Mirrielees, Batkin)

1. Vocal Expression.—Courses in Vocal Expression are open to a limited number of students in the order of their application. Applications should be made before the first meeting of the class in the semester, and the instructor reserves the right to refuse to enroll students who do not appear at the first session of the class.

a. The Speaking Voice.—Lectures on the voice and how to use it, class drill and exercises, personal conferences. Prerequisite to all other courses in Vocal Expression.

1 unit, either semester (Bassett)

b. Reading Aloud.—A study of the principles of expressive reading, and the vocal interpretation of masterpieces in prose and poetry, with some practice in the preparation and delivery of short speeches on subjects of current interest. As a part of the work of the course each student is expected to memorize and vocally interpret 350 lines of Shakespeare during the semester.

3 units, either or both semesters (BASSETT, BUCKINGHAM)

2. English Composition.—Practical work in narration and description, first semester; in exposition, second semester. In one of the two sections meeting at 10:15, exposition will be given in the first semester, and narration and description in the second.

2 units, both semesters (HALL, RUSSELL, SMITH, BROOKS)

3. Note Taking.—Practice in the taking of notes, both from lectures and reading, and in the preparation of abstracts and summaries. 1 unit, either semester (SEWARD)

4. Modern English.—The spoken language. Lectures on the relation of English to other tongues, the history and character of its vocabulary, standards of pronunciation, etc.

2 units, 1st semester (NEWCOMER)

5. English Classics.—A study of representative works of great English writers from Malory to Burke. Open only to first-year students who are not English majors.

2 units, both semesters (RUSSELL, HALL)

6. Outline History of English Literature.—A survey, critical and historical, of English literature in its larger aspects, with readings. Designed primarily for English majors in the first year.

3 units, 1st semester (NEWCOMER)

7. American Literature.—A survey of American literary history. Lectures and reports. 3 units, 2d semester (BROOKS)

11. Vocal Interpretation.—*a.* An advanced course in the vocal interpretation of literature. Designed particularly for those who intend to teach English literature. Prerequisites: courses 1*a* and 1*b*.

2 units, 1st semester (BASSETT)

b. Dramatic Literature (second semester). A careful analysis of two or three plays of Shakespeare. Members of the class will vocally interpret characters and scenes assigned for individual study. Prerequisite: course 11*a*. 2 units, 2d semester (BASSETT)

12. Advanced Composition.—Including both rapid writing and the preparation of long themes. Prerequisite: course 2.

2 units, both semesters (RUSSELL)

13. News Writing.—Practice in abstracting and condensing, writing within time and space limits, copy-reading and headline writing; together with instruction in methods of gathering news and in the duties of the various members of a newspaper staff. Prerequisite: course 2. 2 units, both semesters (SMITH)

15. Shakespeare.—The first semester's work consists of a rapid reading of a considerable number of the plays in chronological sequence. The second semester is devoted to a more careful study of several additional plays. Open in the first semester to all second-year students; in the second semester to English majors and such others as show special interest and aptitude.

3 units, 1st or both semesters (BASSETT, ALLAN)

16. English Bible.—Representative portions of the Bible studied as literature, with some consideration of the history and the prose style of the English versions. Not open to first-year students.

3 units, 2d semester (RUSSELL)

19. Early Nineteenth Century Literature: 1798-1832.—A survey of English literature (exclusive of the novel) from the publication of Lyrical Ballads to the death of Scott.

2 units, both semesters (SEWARD)

20. Later Nineteenth Century Literature.—[Not given in 1911-12.]

2 units, both semesters (SEWARD)

ADVANCED AND SPECIAL COURSES

21. Public Speaking.—Practice in the preparation and delivery of speeches adapted to various audiences and occasions, with attention to the style of spoken discourse based on a study of masterpieces of oratory. Prerequisite: course 2.

2 units, both semesters (BASSETT, BATKIN)

22. Oral Debate.—Practice in the preparation and delivery of oral arguments, chiefly on current public questions. Open to a limited number of students who have taken or are taking course 24, to be admitted in the order of application. [Not given in 1911-12.]

2 units, both semesters (BASSETT)

24. Argument.—The theory of argumentation, with practice in the preparation of briefs and forensics. Open to all students in the third and fourth years. 2 units, both semesters (Briggs)

25. Short Story Writing.—Practice in the writing of short stories, and a study of the principles governing their composition. Open by permission to students in their third and fourth years.
2 units, both semesters (Mirrielees)

26. Play Construction.—The principles of dramatic construction, developed in connection with the student's own work. Conferences. Open by permission to third-year and fourth-year students.
2 units, both semesters (Gray)

27. Current Newspapers.—The study and comparison of current daily newspapers with a view to observing their policies and ideals as shown in the news columns. Ordinarily English 13 should precede this course. 3 units, both semesters (Smith)

31. Elizabethan Drama.—A survey of English dramatic literature from its origins to the closing of the theatres, omitting Shakespeare. Open to students of all departments in third and fourth years. [Not given in 1911-12.] 3 units, 2d semester (Gray)

32. The Restoration and the Eighteenth Century.—From 1660 to 1740, the age of Dryden and the age of Pope, first semester. From 1740 to 1798, the age of Johnson and the early Romantic revival, second semester. 3 units, both semesters (Hall)

33. Milton: Paradise Lost.—Open to third-year and fourth-year students of all departments. [Not given in 1911-12.]
2 units, 1st semester (Newcomer)

34. Wordsworth.—Open to third-year and fourth-year students of all departments. 2 units, 1st semester (Newcomer)

35. Browning.—Open to third-year and fourth-year students of all departments. 2 units, 2d semester (Newcomer)

36. English Fiction.—A course in the history of English Fiction, with emphasis on the rise and development of the novel in the eighteenth and nineteenth centuries. Open to third-year and fourth-year students. [Not given in 1911-12.]
2 units, both semesters (Briggs)

37. Satire.—Open to third-year and fourth-year students. [Not given in 1911-12.] 2 units, 2d semester (Russell)

38. The Modern Drama.—A study of certain significant dramas of Ibsen, and of contemporary dramatists. Open to students of all departments in the third and fourth years.

3 units, both semesters (GRAY)

39. The Modern Novel.—The reading of one novel a week, supplemented by lectures covering additional works of the authors studied and some account of other important novelists of the time. The list of novels to be read in 1911-12 may be secured at any time from the instructor. It is suggested that students intending to take this course read as many as possible of these works in advance. Open to students in the third and fourth years. [Not given in 1911-12.]

3 units, 2d semester (GRAY)

40. Contemporary Poetry.—Lectures covering the chief English and American poets from Arnold and Rossetti to the present day. [Not given in 1911-12.] 3 units, 2d semester (GRAY)

42. Teachers' Course in English.—A study of the methods of teaching Composition (first semester) and Literature (second semester) in secondary schools. Open to students in senior year.

2 units, both semesters (SEWARD)

ALLIED COURSES IN OTHER DEPARTMENTS

Chaucer.—[English Philology 2.]

2 units, 1st semester (FLÜGEL)

History of Early English Literature.—[English Philology 3.]

3 units, 1st semester (FLÜGEL)

Beowulf.—[English Philology 5.]

3 units, 2d semester (BRIGGS)

Chaucer (advanced course).—[English Philology 8.]

2 units, 2d semester (FLÜGEL)

Ballads and Lyrics of the Sixteenth Century.—[English Philology 9.] 2 units, 2d semester (FLÜGEL)

The Greek Epic.—[Greek 18.]

2 units, 1st semester (MURRAY)

Greek Tragedy.—[Greek 19.]

2 units, 2d semester (MURRAY)

Dante and the Divine Comedy.—[Romanic Languages 21.]

2 units, 2d semester (JOHNSTON)

Graduate Courses

51. Poetics.—A critical examination of some of the classic theories of poetry, taken in chronological sequence.
2 units, 2d semester (Gray)

52. Development of English Prose.—An examination of special works illustrating the development of prose, particularly throughout the Elizabethan period. [Not given in 1911-12.]
2 units, 2d semester (Newcomer)

53. Marlowe.—A study of Marlowe's work and his position in English literature. 2 units, 1st semester (Briggs)

54. Spenser.—The Faërie Queene in its relation to the epics of chivalry. 2 units, 2d semester (Briggs)

55. Shakespeare.—A study of Shakespeare's sonnets.
2 units, 2d semester (Newcomer)

56. The Elizabethan Lyric.—A study of the lyric as a type, based on the consideration of lyric poetry from Spenser to the Restoration. [Not given in 1911-12.]

57. Seminary.—The application of the principles of criticism in a special field. In 1911-12, Taine's *History of English Literature* will be carefully read, and his methods and results considered.
2 units, 1st semester (Gray)

58. Journal Club: Literary section.—Reports on current literature by instructors and graduate students. Fortnightly.
1 unit, both semesters

ENGLISH PHILOLOGY

Ewald Flügel, Professor.
William Dinsmore Briggs, Assistant Professor (Department of English Literature).

1. Anglo-Saxon.—Anglo-Saxon Grammar and translation of select passages in prose. 3 units, 1st semester (Briggs)

2. Chaucer.—This course is an elementary one, and includes an outline of Middle English Grammar for the beginner.
2 units, 1st semester (Flügel)

3. History of Early English Literature (to 1557).—
3 units, 1st semester (Flügel)

Advanced and Graduate Courses

In order to prepare the future high school teachers satisfactorily, candidates for the Teachers' Recommendation in English are expected to take, besides the work in Literature, a whole year's advanced work in English Philology. If properly prepared they will be admitted to the Seminary and other advanced courses during their senior year. Candidates for the Master's Degree are expected to do at least a year's post-graduate work in English Philology, for which a reading knowledge of German, French (old and modern), and Latin is a prerequisite.

4. **Middle English Grammar.**—
2 units, 1st semester (Flügel)

5. **Beowulf.**—3 units, 2d semester (Briggs)

6. **English Paleography.**—[Not given in 1911-12.]

7. **Middle English Exercises.**—The Pearl; Piers Plowman.
2 units, 2d semester (Flügel)

8. **Chaucer** (advanced course).—Interpretation of the Prologue, the "Links," and lectures on the history of Chaucer criticism. Prerequisite: course 2 or its equivalent. Open to seniors of other departments. 2 units, 2d semester (Flügel)

9. **Ballads and Lyrics of the Sixteenth Century.**—[As Teachers' Course, 3 units.] 2 units, 2d semester (Flügel)

10. **History of English Philology.**—Lectures. [Not given in 1911-12.] 2 units, 2d semester (Flügel)

11. **Seminary: King Alfred's Boethius,** First semester; **Research Work in Word History,** Second semester.—Papers and Lectures.
2 units, both semesters (Flügel)

12. **Journal Club:** Philological Section.—Reports on current journals by instructors and graduate students.
1 unit, both semesters, fortnightly

BIBLICAL HISTORY AND LITERATURE

David Charles Gardner, Lecturer.

Theresa Pell Russell (English), Philip Arnold Knowlton (Greek), Instructors.

1. **Life and Teaching of Christ.**—A history of the life and times of Jesus, with a study of the four Gospels, an analysis of the Ethics of Jesus, and the application of his teaching to the life of to-day. Lectures, discussions, and papers. 1 unit, both semesters. (Gardner)

Greek Testament.—A study of the Gospels and Acts, with lectures on the problems involved. [Greek 12.]

2 units, 2d semester (KNOWLTON)

English Bible.—Representative portions of the Bible studied as literature, with some consideration of the history and the prose style of the English versions. Not open to first-year students. [English 16.]

3 units, 2d semester (RUSSELL)

PHILOSOPHY

HENRY WALDGRAVE STUART, Professor.
GEORGE HOLLAND SABINE, Assistant Professor.
FRANKLIN FOWLER WOLFF, Assistant.

Courses in Philosophy are not open to first-year students.

1. **Elementary Logic.**—The principles of Deductive and Inductive Logic with special attention to the important types of fallacy.

3 units, 1st semester (STUART, SABINE)

2. **Elementary Ethics.**—The ethical as compared with other meanings of Good and Bad. The rise of the distinction, in its ethical sense, in the experience of the individual. The working principles upon which our judgments of ethical goodness and badness are based. Reference will be made under each head to the more instructive historic theories. 3 units, 1st semester (STUART)

3. **History of Philosophy.**—A general course covering the development of philosophical ideas and systems from the early Greek period to the end of the eighteenth century in Germany, and closing with a brief outline of the main philosophical problems of the nineteenth century. Attention will be given throughout to the connections of philosophy with social and political conditions and with science, literature, and religion. 3 units, both semesters (SABINE)

4. **Philosophy of the Nineteenth Century.**—The development of philosophical problems and theories since Kant. Prerequisite: course 3 or course 3*a* (1910-11) or an equivalent.

3 units, 1st semester (SABINE)

5. **Philosophy in the Life of the Nineteenth Century.**—The influence of philosophical ideas as manifested in important social and literary developments of the nineteenth century. The materials for study will be drawn chiefly from English literature. So far as possible the leading ideas thus presented will be correlated with their more explicitly philosophical equivalents. No prerequisite.

3 units, 2d semester (SABINE)

6. **Advanced Logic.**—Methods of investigation in use in the natural and social sciences, and the cardinal assumptions and principles on which these methods are based. Selected investigations from different fields constitute the material for discussion. Prerequisite: course 1 or an equivalent. 3 units, 2d semester (STUART)

7. **Practical Ethics.**—The ethical issues involved in certain fundamental problems of the individual and of society. The treatment of these and similar problems in earlier systems of morality and ethics. A continuation of course 2, but open after consultation to students otherwise qualified. 3 units, 2d semester (STUART)

8. **History and Applications of the Theory of Evolution.**—The history, in outline, of the theory of evolution from its appearance among the Greeks to its formulation by Darwin and other modern representatives. Applications of the evolutionary method outside the province of biology and some philosophical implications of the evolutionary conception of the world. No prerequisite.
2 units, 2d semester (SABINE)

9. **Outlines of General Philosophy.**—The nature of philosophy and the principal problems arising in the attempt of philosophy to take a unified view of the world. An elementary study, critical and constructive, of the answers given by the principal contemporary schools of philosophic thought. Prerequisite: course 3*a* (1910-11) or course 8*a* (1910-11) or, in general, six other units of credit in Philosophy.
2 or 3 units, both semesters (STUART)

10. **Seminary.**—Individual work on topics in ethics and the history of philosophy. By arrangement. (STUART, SABINE)

PSYCHOLOGY

FRANK ANGELL, †LILLIEN JANE MARTIN, Professors.
JOHN EDGAR COOVER, Assistant.

1. **General Psychology.**—Lectures and exercises. Open to first-year students by permission. Titchener's Text-book of Psychology is used as a book of reference.
4 units, 1st semester (ANGELL)

2. **Experimental Psychology.**—Lectures, one hour; laboratory, two hours. Students are recommended to take this course in connection with courses 1, 5, and 6.
3 units, both semesters (MARTIN, ANGELL)

†Absent on leave, second semester, 1911-12.

3. **Cognition and Recognition.**—Open by permission.
2 units, 2d semester (ANGELL)

4. **Advanced Laboratory Work in Psychology.**—
3 units, both semesters (ANGELL, MARTIN)

5. **Applied Psychology.**—With special reference to the Fine Arts.
2 units, 1st semester (MARTIN)

6. **Applied Psychology.**—With special reference to the Social Relations. 2 units, 1st semester (MARTIN)

6a. **Abnormal Psychology and Mental Hygiene.**—
2 units, 2d semester (MARTIN)

7. **Current Psychological Literature.**—In this connection a subsection for the purpose of reading German and French Psychology will be formed, if so desired. By arrangement.
1 or 2 units, both semesters (ANGELL, MARTIN)

8. **Psychology of Thinking.**—
2 units, 2d semester (MARTIN)

9. **Research Work.**—By arrangement.
(ANGELL, MARTIN)

EDUCATION

ELLWOOD PATTERSON CUBBERLEY, Professor.
PERCY ERWIN DAVIDSON, RUFUS CLARENCE BENTLEY, LEWIS MADISON TERMAN, Associate Professors.
JESSE BRUNDAGE SEARS, Assistant Professor.
MORRIS ELMER DAILEY, GEORGE ARCHIBALD CLARK, Lecturers.
FRANCES ELIZABETH SHORT, Assistant.

The Department of Education offers three main lines of work:

1. Courses of a general nature on the history, function, and administration of public education, intended in part as information courses for the general university student and without reference to the work of teaching. To such students courses 1, 2, 3, 7, 10, and 12 are recommended.

2. Courses intended to assist other departments in preparing their students for work in secondary schools. All such students should confer with members of the Department of Education as to courses, but in general courses 1, 2, and 13 are recommended if the candidate has not had experience in teaching. Course 13 will be required for the high school teacher's recommendation.

3. Courses primarily for major students, or those making Education a minor, and intended to give special preparation to (*a*) those who desire to become teachers of Education in normal schools or colleges, (*b*) those who wish to prepare for supervisory or administrative positions in the public schools, and (*c*) those who wish to prepare for special educational work in the elementary or secondary field.

The courses in Education are open to all students as electives or as minor subjects, but only those who desire to prepare for one of the lines of work mentioned above under (3), and whose preparation and experience are satisfactory to the Department, will be accepted as major students. In special cases those without teaching experience may be accepted as major students, but all such must be approved in practice teaching (course 18) without delay.

Major students begin their work in Education with the sophomore year, taking courses 1 and 2.

I. Elementary and Introductory Courses

(*Open to teachers, and to all others except first-year students.*)

1. Public Education in America.—A study of the province and some of the more important problems of public education in the United States. An introductory course. Lectures, following a syllabus, with assigned readings. 2 units, 1st semester (Cubberley)

2. Educational Theory.—An introductory course dealing with topics fundamental to education, such as the nature of infancy, physical and social heredity, the relation of the organism to environment, of instinct to habit, etc. Lectures, following a syllabus, with assigned reading. 2 units, 2d semester (Davidson)

II. More Advanced Courses, but of a Somewhat General Nature

(*Open to teachers, and to third- and fourth-year students. In general, courses 1 and 2 should precede these courses. Course 3 should precede or accompany course 4.*)

3. History of Education in Europe.—A study of the development of educational ideals and systems from the time of the Greeks and Hebrews to the present, with particular reference to the forces which have operated in the evolution of the various historic ideals and schools. The first semester (3*a*) covers the period up to the Reformation, and the second semester (3*b*) the period from the Reformation to the present. Either semester may be taken separately. Lectures, following a syllabus, with assigned readings.

3 units, both semesters (Sears)

4. **Sources for the History of Education.**—A more extensive and intensive study of the sources for the History of Education in Europe than is undertaken in connection with course 3. [Not given in 1911-12.] 2 units, both semesters (SEARS)

5. **History of Education in America.**—A more advanced course, dealing with selected problems in the history and present condition of education in the United States. [Not given in 1911-12.]
2 units, both semesters (SEARS)

7. **Social and Moral Education.**—A study of the important facts and principles underlying social and moral education, as a basis for a criticism of current educational practice in this country and elsewhere. The course should be preceded by elementary work in psychology or ethics. 2 units, both semesters (DAVIDSON)

8. **Logic of Education.**—A study of the significance for education of the theory of knowledge and the psychology of thinking. Herbartian "General Method" will be reviewed. Open to students who have taken elementary work in psychology or logic.
2 units, both semesters (DAVIDSON)

9. **City School Administration.**—A study of the educational, financial, and administrative principles underlying the proper administration of school systems in cities, with a view to the establishment of principles of action. Course 9 alternates with course 10. [Not given in 1911-12.] (CUBBERLEY)

10. **State School Administration.**—A study of the educational principles underlying the proper administration of school systems in States and counties, and involving a comparative study of the school laws and school systems of the various American States. The course includes a study of such topics as Federal and State policy, forms of control, revenue and its apportionment, the State and the teacher, the State and the child, private and sectarian education, and State oversight and control. Course 10 alternates with course 9.
2 units, both semesters (CUBBERLEY)

11. **Physical Aspect of the Child.**—This course will include a consideration of the following topics: growth in height and weight; growth of parts and organs; common abnormalities of eye, ear, nose, throat, spine, heart, lungs, and teeth; nervous disorders, speech defects, malnutrition, mortality, and mental deficiency; physiological aspects of sleep, work, play, and rest. 3 units, 1st semester (TERMAN)

12. **Educational Hygiene.**—This course will deal with the subject principally from the administrative point of view, and will include such

topics as the history, methods, results of medical inspection of schools; educational adaptations for defectives; the hygiene of gradation and promotion; the number and length of school sessions; the hygiene of reading, writing, singing, drawing, and manual training; the hygienic supervision of athletics; the playground movement; hygienic aspects of co-education; the status of hygiene teaching in the schools; heating, lighting, ventilation, and the care of school buildings.

3 units, 2d semester (TERMAN)

III. COURSES INTENDED PRIMARILY FOR THOSE PREPARING TO TEACH IN SECONDARY SCHOOLS

(*Open to seniors and graduate students. Courses 1 and 2 should ordinarily precede these courses. Course 17 should precede course 18 by one semester.*)

13. Secondary Education.—A course dealing with the organization, scope, and method of public and private secondary schools in America, and including a consideration of the preparatory, cultural, commercial, technical, and industrial aspects of secondary education. Lectures, assigned readings, and reports. Intended primarily for and required of those preparing for the teacher's certificate. Open to seniors and graduates only. 3 units, 2d semester (BENTLEY)

14. Adolescence.—A survey of some of the literature of the subject with special reference to those phases which are of most significance to those engaged in secondary education.

2 units, 1st semester (TERMAN)

15. The Administration of a School.—A practical course, dealing with the work of teachers and principals in a high school or city school. This course will involve some visitation of high schools in the vicinity of the University. 2 units, 2d semester (BENTLEY)

16. Types of Secondary Schools.—A more advanced course than 13, and consisting of an examination of the work proposed for the various new types of high schools—polytechnic, commercial, agricultural, and industrial—and a study of such schools as found in other lands, with a view to ascertaining the possibilities of such instruction.

2 units, 2d semester (BENTLEY)

17. Method and Management of Instruction.—A practical course in class-room management and the theory of instruction. Intended as a preparatory course for those expecting to do practice teaching, and should be taken the semester preceding. Not required if course 8 has been taken. 1 unit, either semester (SEARS)

18. Practice in Teaching.—Actual practice in the handling of classes and the giving of instruction, with accompanying conferences, as required by the rules of the State Board of Education for a California High School Teacher's Certificate. This may be arranged for at the University, at the San Jose State Normal School, or at any other California State Normal School. Hours for teaching must be arranged in advance: (*a*) if at the University, with Mr. SEARS; (*b*) if at the San Jose State Normal School, with President DAILEY. Conference with all practice teachers.

4 units, either semester (SEARS, DAILEY)

19. Commercial Teachers' Training Course.—A practical demonstration course in the teaching of shorthand and typewriting as branches of high school instruction, supplemented by discussions and demonstrations in the treatment of business correspondence, geography, arithmetic, law, and other collateral subjects in their relation to the training of stenographers and bookkeepers, the object of the course being to give a working plan for handling commercial subjects in the high school. The course will fit for the actual duties of a stenographer or secretary and hence will be of interest also to students contemplating a business career. One hour of instruction—lectures and discussions—and two hours practice, three times weekly.

3 units, both semesters (G. A. CLARK)

IV. ADVANCED AND SPECIAL COURSES

(*Intended primarily for teachers of some experience, and for students making Education a major or a minor. Open to such, of junior standing or above.*)

20. Criticism and Supervision of Instruction.—A few advanced students, who have had sufficient teaching experience, will be allowed to undertake the personal investigation, in the schools of the vicinity, of problems in instruction or supervision. Collateral reading and detailed written reports will be required. Enrollment only after conference with the instructor concerned.

1 unit, either semester

(CUBBERLEY, BENTLEY, DAVIDSON, TERMAN)

21. School Administration Practice.—A laboratory course in school administration practice, dealing with the office and supervisory work of superintendents of schools. Visits will be made to school systems in the vicinity of the university. [Not given in 1911-12.]

2 units, 2d semester (CUBBERLEY)

22. **Statistical Method.**—The theory of statistical work and the application of statistical method to the study of typical problems in the different fields of education. Course 21 alternates with course 22.

2 units, 2d semester (CUBBERLEY)

23. **Elementary Education.**—A course dealing with the organization of elementary schools, with particular reference to the content and use of the course of study. The Kindergarten will be considered incidentally. Intended primarily for prospective supervisors of elementary education. 2 units, 1st semester (DAVIDSON)

24. **Clinical Child Psychology.**—A study of mental and physical "tests" as employed in the diagnosis of children. Prerequisites, General Psychology and Experimental Psychology.

2 units, 2d semester (TERMAN)

25. **Experimental Pedagogy.**—A study of the experimental investigations bearing upon such topics as the pedagogy of the school subjects (reading, writing, spelling, arithmetic, etc.); economic learning and habit formation; the doctrine of formal discipline; methods of testing the results of school work; the distribution of traits; fatigue, etc. General Psychology is a prerequisite to this course.

2 units, both semesters (TERMAN)

26. **The Curriculum.**—The work of the course for the year will consist of the study of a class of retarded pupils from the public schools, with special reference to the causes of their retardation and their use of the elementary school curricula.

2 units, both semesters (DAVIDSON)

27. **Educational Theory, Advanced Course.**—The course deals with phases of biology and psychology more directly concerned in education. [Not given in 1911-12.] (DAVIDSON)

28. **Foreign School Systems.**—A comparative study of the more important foreign state school systems, their policy of organization, ideals of work, methods of instruction, training of teachers, courses of study, statistics, and recent reforms. Different national systems will be studied each year. 2 units, both semesters (CUBBERLEY)

29. **Literature of Child Psychology.**—A review of some of the more important literature of child psychology, with particular reference to those phases which are of most significance to supervisors and teachers in elementary schools. [Not given in 1911-12.]

2 units, 1st semester (TERMAN)

30. **The Training of Teachers.**—This course deals with the organization of normal schools and the professional preparation of

teachers, and is primarily intended for those entering on the work of training and supervising teachers. [Not given in 1911-12.]

1 unit, 2d semester (DAILEY)

32. **Journal Club.**—Regular meetings of instructors and advanced students for the discussion of new books and current literature.

1 unit for the year (CUBBERLEY)

33. **Thesis Work.**—In certain courses, students may be given an additional hour of credit on presentation of a satisfactory thesis on an assigned topic embodying the results of independent work. The consent of the instructor is necessary before registering. Seniors in Education will be expected to present a thesis in some field for graduation.

34. **Special Courses.**—Special work in independent research may be provided for students prepared to do advanced work, the nature of the investigation being determined by the student's preparation and needs. Such work will include studies in administration, educational history, and the curriculum.

35. **Seminary: History and Administration of Education.**—Advanced students desiring to work on problems in the history or administration of education will register for this course. The topic for 1911-12 will be current educational problems.

2 units, both semesters (CUBBERLEY)

COURSES IN OTHER DEPARTMENTS

The following special Teachers' Courses in other departments are designed for students preparing to teach these special subjects in secondary schools. Such courses are usually necessary for the departmental recommendation, but do not count again as part of the required units in Education.

a. Teachers' Course in Greek.—[See Department of Greek.]

b. Teachers' Course in Latin.—[See Department of Latin.]

c. Teachers' Course in German.—[See Department of Germanic Languages.]

d. Teachers' Course in French.—[See Department of Romanic Languages.]

e. Teachers' Course in English.—[See Department of English.]

f. Teachers' Course in History.—[See Department of History.]

g. Teachers' Course in Drawing.—[See Department of Graphic Art.]

h. Teachers' Course in Elementary Physics.—[See Department of Physics.

HISTORY

EPHRAIM DOUGLASS ADAMS, ARLEY BARTHLOW SHOW, EDWARD BENJAMIN KREHBEIL, Professors.
PAYSON JACKSON TREAT, HENRY LEWIN CANNON, Associate Professors.
EDGAR EUGENE ROBINSON, PERCY ALVIN MARTIN, Assistant Professors.
DAVID STARR JORDAN, Lecturer.

The Teacher's Recommendation.—To obtain a Teacher's Recommendation in History the applicant must have completed, in a manner acceptable to the Department, three of the courses 3, 4 (or 11), 5, 6, and 7, one advanced course (throughout one year), and the Teachers' Course in History.

1. Historical Training Course.—A practical course in the finding and handling of historical material. Required of, and limited to, first-year History majors. 1 unit, both semesters (MARTIN)

[**History of Rome.**—See Latin 29.]

3a. The Early Middle Ages, 476-1095.—A general course, open to all students. 3 units, 1st semester (SHOW)

3b. The Later Middle Ages, 1095-1492.—A continuation of course 3*a*. Open to all students who have had course 3*a*, or a satisfactory equivalent. 3 units, 2d semester (SHOW)

4a. English History to 1603.—General outline course, open to a limited number of first-year students.
3 units, 1st semester (CANNON)

4b. English History from 1603 to the present time.—A continuation of course 4*a*. 3 units, 2d semester (CANNON)

5a. Modern European History, 1500-1715.—A general outline course. Not open to first-year students.
2 units, 1st semester (KREHBIEL)

5b. Modern European History, 1715-1900.—A continuation of course 5*a*. 2 units, 2d semester (KREHBIEL)

6a. American Colonial History.—Not open to first-year students.
2 units, 1st semester (ROBINSON)

6b. American Revolution and the Constitution.—A continuation of course 6*a*. 2 units, 2d semester (ROBINSON)

7. United States History since 1815.—Open to students who have had one course in history.
2 units, both semesters (ADAMS)

8. The Westward Movement.—A study of the expansion of the American people from the Atlantic seaboard to the Pacific. Open to students who have had one course in American history.
3 units, both semesters (ROBINSON)

9a. The Far East.—An account of the relations between Western nations and the peoples of Eastern Asia. The history of the Portuguese, Dutch, British, and French possessions in the Far East. Not open to first-year students. 3 units, 1st semester (TREAT)

9b. The Far East.—China, Japan, the Philippines. Not open to first-year students. 3 units, 2d semester (TREAT)

10. Spain and Spanish America.—A brief survey of the History of Spain, followed by a study of the political, social, and industrial development of Spanish America. A reading knowledge of Spanish is useful but not required. Not open to first-year students.
2 units, both semesters (MARTIN)

11. English Constitutional History.—The course aims to explain the development and operation of the present English constitution as well as to give the background for American constitutional history. Not open to first-year students.
2 units, both semesters (CANNON)

12. History of Germany.—General outline course, not open to first-year students. 3 units, both semesters (MARTIN)

13a. The Ancient Church.—A general course in Church History from the Apostolic Age to Gregory the Great (A. D. 1-590), with special reference to its connection with the general movements of the age. Open to all except first-year students.
2 units, 1st semester (SHOW)

13b. The Mediaeval Church.—A continuation of course 13*a*, to the end of the Crusades and the beginning of the church reform movement. 2 units, 2d semester (SHOW)

14a. Empire and Papacy in the Middle Ages.—The Investiture Struggle. Open to third-year students who have taken courses 3*a* and 3*b*. [Not given in 1911-12.] 2 units, 1st semester (SHOW)

14b. Empire and Papacy in the Middle Ages.—A continuation of course 14*a*. The Age of the Hohenstaufen. [Not given in 1911-12.]
2 units, 2d semester (SHOW)

15. The French Revolution and Napoleon.—A course of lectures. Discussions, and investigations and reports on various specific points form a part of the work. Open to students who have had courses 5*a* and 5*b*. [Not given in 1911-12.]
3 units, 1st semester (KREHBIEL)

15a. Europe in the Nineteenth Century.—A very considerable portion of this course is devoted to contemporary politics in Europe. The course is intended for third- or fourth-year students who are prepared to make independent investigations and reports upon present day problems in Europe. Prerequisites: 5*a* and 5*b*.

3 units, 1st semester (KREHBIEL)

16. Teachers' Course.—Lectures, recitations, and practice dealing with the problems of history teaching in elementary and secondary schools. 2 or 3 units, both semesters (SHOW)

17. Periodical Literature.—Current historical articles. Open to a limited number of advanced students.

1 unit, both semesters (CANNON)

18a. American and English Relations During the Civil War.—Use of British and American documentary material. Open to third-year students who have taken general courses in English and American history. The documents are selected by the instructor, and the course is intended to furnish training in the interpretation of documentary material. 3 units, 1st semester (ADAMS)

18b. American and English Relations, 1815 to 1860.—Search for and selection of material on some assigned topic in diplomacy, with especial reference to use of the United States documents and the British sessional papers. 3 units, 2d semester (ADAMS)

20. International Conciliation.—A course of lectures touching the effects of war and the possibility of substituting peaceful means of settling the differences of nations. Open to third- and fourth-year students of all departments.

3 units, 2d semester (JORDAN, KREHBIEL)

21. Tropical Colonization in the Far East.—A study of the present methods of the English, Dutch, French, German, and American peoples in managing tropical dependencies in the Far East. Open to students who have taken courses 9*a* and 9*b*.

2 units, 1st semester (TREAT)

22. History of Australasia.—An account of British colonization in Australia and New Zealand to the present time. Open to third-year students who have a satisfactory knowledge of English history.

2 units, 2d semester (TREAT)

ADVANCED COURSES

Intended primarily for graduate students, but open to advanced undergraduates, with permission of their instructors.

27. Mediaeval Institutions.—A practical study of select documents in the field of German constitutional history. Ability to read Latin and German is required. By appointment.
2 units, both semesters (SHOW)

28. Seminary in Westward Movement.—Topic for 1911-12: The Jacksonian Epoch. 2 units, both semesters (ROBINSON)

29. Seminary in English History.—Subject for 1911-12: The Spanish Armada. 2 units, both semesters (CANNON)

30. The Renaissance in Italy.—Reading ability in French and German desirable. 2 units, both semesters (MARTIN)

31. American Diplomatic History since 1815.—Open to students who have had course 18, and to others by special permission. Thesis required. 2 units, both semesters (ADAMS)

32. Seminary in Modern European History.—By appointment.
2 units, both semesters (KREHBIEL)

35. Seminary in American-European Relations in Nineteenth Century.—Assignment of topic to each student and thesis required. 2 units, both semesters (ADAMS)

36. American Diplomacy in the Far East.— Open to students who have had course 9*b*. 2 units, both semesters (TREAT)

ECONOMICS AND SOCIAL SCIENCE

ALVIN SAUNDERS JOHNSON, BURT ESTES HOWARD, †ALBERT CONSER WHITAKER, Professors.
HARRY ALVIN MILLS, Associate Professor.
IRA BROWN CROSS, Assistant Professor.
DONALD FREDERICK GRASS, Instructor.
MAX LIPPITT LARKIN, Acting Instructor.

Course 1 is a prerequisite to all other courses in the Department.

1. Elements of Economics.—A general and introductory course. Two lecture hours and one quiz hour each week.
3 units, both semesters (JOHNSON)

2. Market Organization.—
3 units, 2d semester (LARKIN)

3. Accounting.—
3 units, 2d semester (GRASS)

4. Money and Banking.—Forms and laws of money; the money question. Credit and banking; the money market and foreign exchanges. 3 units, both semesters (WHITAKER)

†Absent on leave, second semester, 1911-12.

5. **Railway Transportation.**—The present American railway system, railway finance, railway statistics, theory of rates, methods of public control. 3 units, 2d semester (JOHNSON)

6. **The Corporation and Trust Problem.**—Elementary survey of corporation law; history of corporations and corporate combinations, pools and trusts, in relation to public policy; present tendencies in legislative control. 2 units, both semesters (WHITAKER)

7. **Tariffs and Commercial Policy.**—A study of the influence of protective tariffs upon international trade and domestic industry. Reciprocity and preferential tariff policies and subsidies are considered. 3 units, 1st semester (JOHNSON)

9. **Financial History of the United States.**—A study of the finances of the federal government, including the financial provisions of the Constitution, the tariff and the internal revenues, growth of expenditures, and the public debt.
2 units, 1st semester (MILLIS)

10. **The Labor Problem.**—Primarily a study of American trade unionism, strikes and lockouts, boycotts, arbitration and conciliation.
3 units, 1st semester (MILLIS)

10a. **Labor Legislation.**—The government in relation to the labor problem, including the regulation of child labor, sweating, employers' liability, workmen's compensation, industrial insurance and old age pensions, and the minimum wage system. Should be taken with course 10. 3 units, 2d semester (MILLIS)

11. **Immigration and Race Problems.**—A study of the economic, political, and social problems resulting from European and Asiatic immigration to the United States.
3 units, 2d semester (MILLIS)

12. **Charities and Corrections.**—A general survey of the leading economic, social, and individual causes of social disorder and poverty; methods and principles of modern relief policies; specific social problems; social legislation and other current movements for social betterment. 3 units, both semesters (CROSS)

13. **Socialism.**—A study of the fundamental doctrines of socialism and allied social movements. 3 units, 2d semester (CROSS)

14. **Economic History of England.**—The economic and social history of England. 3 units, 1st semester (CROSS)

ADVANCED AND GRADUATE COURSES

8. Public Finance.—A general course dealing chiefly with the principles underlying public expenditures, revenues, debts, and financial administration. 3 units, 1st semester (MILLIS)

15. American Methods of Taxation.—An intensive study of the federal and the state and local taxes, including the customs and internal revenue duties, the income tax, the general property and corporation taxes, and the inheritance and various forms of business taxes. Should be preceded by Courses 8 and 9. Others may register with the consent of the instructor. 3 units, 2d semester (MILLIS)

16. History of Political Economy.—A survey of the growth of economic theories and opinions in modern times, together with an inquiry into the character and methods of current economic science. 2 units, both semesters (JOHNSON)

17. Value and Income.—In 1911-12 students in this course will study the theory of interest on capital, making use primarily of the works of Fisher and Carver. 2 units, both semesters (WHITAKER)

POLITICAL SCIENCE

30. Comparative Federal Government.—A comparative study of the governments of Germany, Switzerland, and the United States. Open to students who have taken History 7, History 5*b*, and History 12, or their equivalents. A reading knowledge of German is desirable but not required. 3 units, both semesters (HOWARD)

31. American Politics.—An inquiry into the organization and administrative functions of the government, the competence of its courts, problems touching citizenship, etc. Open to students who have taken History 7 or History 19, or an equivalent. 3 units, 1st semester (HOWARD)

32. Municipal Government.—Including a critical study of various municipal charters and forms of city government, together with an investigation of certain problems in municipal administration. 3 units, 2d semester (HOWARD)

33. Parliamentary Government.—A study of the governments of England and France. Not open to first- and second-year students. [Not given in 1911-12.] 3 units, 2d semester (HOWARD)

34. Seminary in Political Science.—An examination of the basal theories underlying political institutions. Open only to students who have a good knowledge of general and constitutional history, and who read German or French readily. 2 units, both semesters (HOWARD)

LAW

†Charles Henry Huberich, Frederic Campbell Woodward, Arthur Martin Cathcart, †Wesley Newcomb Hohfeld, Charles Andrews Huston, Joseph Walter Bingham, Professors.
Howard Leslie Smith, Acting Professor.
Samuel Watson Charles, Lecturer.

The purpose of the Department is to provide a thorough legal education for students who are fitted by their maturity and their previous academic training to pursue professional study under university methods of instruction. The curriculum covers three academic years and constitutes an adequate preparation for the practice of law in any English speaking jurisdiction. Elective courses in Code Pleading and in California Practice are offered, and graduates of this school are admitted to the California Bar without examination. A comprehensive group of courses in Public Law, of value not only to the law student but to the student who contemplates entering the diplomatic, consular, or other government service, is a feature of the curriculum.

Only college graduates and students who have completed three years of work in the pre-legal curriculum of this University (see below), or its equivalent, are admitted as regular students. Students in the pre-legal curriculum are permitted to count one year of law study toward the degree of Bachelor of Arts, and are thereby enabled to complete the Law School curriculum in two years after graduation. Under certain conditions persons over twenty-three years of age who have had experience in business, or who evince uncommon ability, may be admitted as special students, not candidates for a degree.

The Library

The Law Library contains over 15,000 volumes, including complete sets of the English, Irish, Scotch, and Canadian reports, the reports of all the Federal courts, a practically complete set of the reports of the American States and of the Canadian Provinces, the National Reporter system, the standard collections of cases (including the American Decisions, American Reports, American State Reports, Lawyers'

†Absent on leave, 1911-12.

Reports Annotated, and American and English Railway Cases), a working collection of statutes, text-books, encyclopedias, digests, and other books of reference, and sets of the leading American, British, and Continental legal periodicals.

Pre-Legal Curriculum

For undergraduate students who enter with the intention of preparing for the study of law, a pre-legal curriculum is offered by the University under the direction of the Faculty of the Law School. This curriculum ordinarily occupies four years and requires that the student obtain 120 units of university credit. The equivalent of three years (90 units of credit) is given to general culture studies (for instruction in which no tuition is charged) and of one year (30 units of credit) to the professional study of law.

The 120 units of work usually are apportioned as follows: To the first and second years, 30 units of general culture studies each; to the third year, 24 units of general culture studies and 6 units in law; to the fourth year, 6 units of general culture studies and 24 units in law. The 90 units of general culture studies may be taken in three years, and the fourth year be devoted entirely to law study.

A pre-legal student is expected to take Introduction to the Study of Law in his second year, Contracts in his third year, and the remaining courses of the first year of the Law School in his fourth year.

In electing courses in general culture subjects it is expected that 54 units will be applied as follows: To English, 10, which shall include courses A and 2 (Composition), and 24 (Argumentation); to a modern language other than English, 6; to Latin or Greek, 4 (8 additional units in a modern language other than English may be substituted); to History, 15; to Economics, 13; to Mathematics, Logic, Chemistry, or Physics, 6.

Students who satisfactorily complete the pre-legal curriculum are granted the degree of Bachelor of Arts by the University, and by reason of having had one year of law study as undergraduates may satisfy the requirements for the degree of Juris Doctor by two years of graduate law study.

Admission to the Professional Curriculum

Admission to the professional curriculum in law is granted to students duly enrolled in the University, as follows:

I. To students who have received the degree of Bachelor of Arts, or an equivalent degree, from this University or some other institution of recognized collegiate rank.

II. To students who have received credit for at least seventy-five units (substantially three years) in the pre-legal curriculum offered by this University, or the substantial equivalent thereof in some other institution of recognized collegiate rank. Students in such pre-legal curriculum, however, who have received credit for forty-five units, will be permitted to take the course in the law of Contracts.

III. In the discretion of the Faculty of Law, to students over twenty-three years of age, who cannot meet the foregoing requirements, but who have had experience in business or who evince uncommon ability. Such special law students will be afforded all the privileges of the School, and will be given a certificate in lieu of the degree awarded to regular students.

Admission to Advanced Standing in Law

By special vote of the Faculty of Law credit may be given without examination for work satisfactorily completed at other law schools, but in no case will credit be given for work not done in residence at an approved law school. Examinations for advanced standing in law, if required, may be taken in places other than at the University. Applications for such examinations should be made not later than April 1, for the May examinations, and not later than November 15, for the December examinations. A fee of five dollars per course is charged for examinations not taken at the University.

Law School Curriculum

The work of the first year in the Law School is required, and consists of the following courses: Contracts, Criminal Law, Torts, Introduction to Property, Equity I, and Agency.

The work of the second and third years in the Law School is elective, but the following courses may not be taken ordinarily before a student has completed the work of two years in the Law School: Administrative Law, Private Corporations, Municipal Corporations, Evidence, and California Practice.

The courses offered in the Law School, roughly grouped for purposes of convenience according to the nature and analogies of the subject matter, are as follows:

1. **Introduction to the Study of Law.**—Nature, origin, and evolution of law; sources of law; sanctions of law; legal rights and duties; classification of law; historical sketch of English and American law. The methods of legal study; the use of reports, digests, encyclopedias, and treatises; practice in the analysis of cases and in the preparation of abstracts and briefs. Open to students of any department who have 25 units of credit in the University. Selected Cases.

2 units, 2d semester (HUSTON)

2. **Criminal Law.**—Nature and sources of criminal law; crime as an act; attempts; criminal intent; circumstances affecting illegality of act; specific offenses; crimes against the person, larceny and allied offenses, crimes against the dwelling-house, conspiracy. Open to pre-legal students having 75 units of credit, and to all law students. Beale, Cases on Criminal Law (2d ed.).

3 units, 2d semester (SMITH)

3. **Constitutional Law.**—Nature and sources of American constitutional law; adoption and amendment of constitutions; separation of powers; power of judiciary to declare acts of the legislative and executive branches of government unconstitutional; citizenship; privileges and immunities of citizenship; due process of law; police power; eminent domain; taxation; ex post facto and retroactive laws; laws impairing the obligation of contracts; regulation of commerce; money; war; government of territories. Open to second- and third-year law students and to well-prepared fourth-year students in history, economics, and political science. Thayer, Cases on Constitutional Law. [Not given in 1911-12.]

3 units, both semesters (HUBERICH)

4. **Administrative Law and Public Officers.**—Administrative regulations; jurisdiction, discretion, adjudication; enforcement of orders; habeas corpus; mandamus; certiorari; equitable jurisdiction in public law. Open to third-year law students. [Not given in 1911-12.] Freund, Cases on Administrative Law.

3 units, 1st semester (HUSTON)

5. **Municipal Corporations.**—General nature; corporate capacity; self government; creation, annexation, division, dissolution, succession; modes of action, ratification and curative acts; estoppel by recitals; municipal police power; local improvement and services, including special assessments; municipal property, especially public streets; municipal contracts; expenditure and donations; indebtedness and its

constitutional limit; liability. Prerequisite: course 25. [To be given in 1912-13.] Case-book to be announced.

2 units, 2d semester (HUSTON)

6. **International Law.**—Nature and sources of international law; territorial rights of states; territorial jurisdiction; jurisdiction on high seas; nationality; belligerency; neutrality. Open to second- and third-year law students, and to well-prepared fourth-year students, in history, economics, and political science. [Not given in 1911-12.] Scott, Cases on International Law. 4 units, 2d semester (HUBERICH)

7. **Conflict of Laws.**—Nature and force of foreign law; comity; jurisdiction over persons and things; jurisdiction of courts; creation of personal rights and of rights of property; torts and contracts; enforcement of rights. Open to second- and third-year law students. [Given in 1911-12 and to be given in alternate years thereafter.] Beale, Cases on Conflict of Laws. 3 units, 1st semester (SMITH)

8. **Admiralty.**—Admiralty jurisdiction, basis; maritime contracts, torts, and crimes; maritime liens, ex contractu, ex delicto, priorities, discharge; bottomry and respondentia obligations; salvage; general average. Open to second- and third-year law students. [Not given in 1911-12.] Ames, Cases on Admiralty.

2 units, 2d semester (HUSTON)

9. **Roman Law.**—A study of the Institutes of Gaius and Justinian and of selected titles from the Digest, Code, and Novels. A reading knowledge of Latin and of either German or French will be required. Open to second- and third-year law students. [Not given in 1911-12.]

2 units, both semesters (HUBERICH)

10. **Persons and Domestic Relations.**—Marriage: promise to marry; marriage contract at common law and under statutes; rights of husband and wife in each other's property; status of married women; transactions between husband and wife; torts affecting marital relations; separation; divorce. Parent and child: custody; services and earnings; torts to children; torts by children; adoption; illegitimacy. Infancy: period of infancy; voidable acts; disaffirmance, ratification; contracts for necessaries; obligations created or authorized by law; liability for tort; guardian and ward. Insanity. Drunkenness. Alienage. Open to second- and third-year law students. [To be given in 1912-13 and in alternate years thereafter.] Woodruff, Cases on Domestic Relations (2d ed.).

2 units, 1st semester (WOODWARD)

11. Introduction to Property.—Distinction between real and personal property; acquisition of rights in personal property; gifts; bailment; lien; pledge. Real property: tenures; estates; seisin and conveyance; Statute of Uses; incidents of ownership in real property; fixtures; easements; covenants as to use; public rights; franchises; rents. Open to pre-legal students having 75 units of credit, and to all law students. Gray, Cases on Property, Vols. I and II (2d ed.), and selected cases. 3 units, both semesters (BINGHAM)

12. Title to Land.—Accretion; title by adverse possession, prescription; methods of transfer of interests in land at common law and under statutes; creation of interests in land by agreement or conveyance; interpretation of instruments of transfer; covenants running with the land; covenants for title; execution of deeds; fraudulent conveyances; recording. Open to second- and third-year law students. [To be given in 1912-13 and in alternate years thereafter.] Gray, Cases on Property, Vol. III and part of Vol. IV (2d ed.).
4 units, 1st semester (BINGHAM)

13. Wills and Administration.—Acquisition of property on the death of former owner, escheat, descent, occupancy, gifts mortis causa; the making, revocation, and republication of wills, probate and administration, payment of legacies and distribution, ademption and lapse of legacies. Open to second- and third-year law students. Prerequisite: course 11. [Given in 1911-12 and to be given in alternate years thereafter.] Gray, Cases on Property, Vol. IV (2d ed.), and selected cases.
4 units, 2d semester (BINGHAM)

15. Future Interests.—Vested and executory interests; construction of language creating future interests; powers; rule against perpetuities; provisions for forfeiture and restraints on alienation; the California law of future interests. Prerequisite: course 11. Open to second- and third-year law students. [Given in 1911-12 and to be given in alternate years thereafter.] Gray, Cases on Property, Vol. V and part of Vol. VI (2d ed.), and selected cases.
4 units, 1st semester (BINGHAM)

16. Water Rights and Irrigation Law.—A course in the intensive study of the law of water, with especial reference to water rights in the Western States. Open to second- and third-year law students. Cases and legislative enactments. [To be given in 1912-13.]
3 units, 2d semester (BINGHAM)

17. Mining Law.—A course on mining titles under the Federal mining acts, with especial reference to mining rights in the Western States and Alaska. Open to second- and third-year law students. [To be given in 1912-13 and in alternate years thereafter.] Selected cases and legislative enactments.

2 units, 2d semester (BINGHAM)

18. Torts.—Trespass to person, to real property, and to personal property; excuses for trespass; conversion; legal cause; negligence; contributory and imputed negligence; plaintiff's illegal conduct as a defense; duties of land-owners; hazardous occupations; liability for animals; deceit, defamation, slander, libel, privilege, malice; malicious prosecution, criminal and civil; interference with social and business relations, inducing breaches of duty, fair and unfair competition, strikes, boycotts, business combinations. Open to pre-legal students having 75 units of credit, and to all law students. Cases on Torts: Ames, Vol. I (3d ed.); Smith, Vol. II (2d ed.).

3 units, both semesters (CATHCART)

19. Quasi-Contracts.—Sources, extent, and nature of the obligation; distinctions between quasi-contract and pure contract, and between quasi-contract and tort; obligation arising from benefits conferred in the absence of contract; obligation arising from benefits conferred under a contract but without the receipt of an equivalent. Open to second- and third-year law students. [To be given in 1912-13 and in alternate years thereafter.] Woodruff, Cases on Quasi-Contracts.

3 units, 2d semester (CATHCART)

20. Contracts.—Offer and acceptance; consideration; contracts under seal; contracts for the benefit of third persons; assignments; joint and several contracts; the Statute of Frauds; conditions; impossibility; illegality; discharge of contracts. Open to pre-legal students having 45 units of credit, and to all law students. Williston, Cases on Contracts. 3 units, both semesters (WOODWARD)

21. Bills and Notes.—This course considers all types of negotiable paper, and discusses in detail the law of bills of exchange, notes, and checks, including: formal requisites; acceptance; indorsement; transfer; extinguishment; obligation of parties; diligence; specialty character; the effect of the Negotiable Instruments Law. Open to second- and third-year law students. [To be given in 1912-13 and in alternate years thereafter.] Smith and Moore, Cases on Bills and Notes.

4 units, 2d semester (HUBERICH)

22. Sales.—Subject matter of sale; executory and executed sales; bills of lading and jus disponendi; seller's lien and right of stoppage in transitu; fraud; factors acts; warranty and remedies for breach of warranty; Statute of Frauds. Open to second- and third-year law students. [To be given in 1912-13 and in alternate years thereafter.] Williston, Cases on Sales (2d ed.).

4 units, 2d semester (WOODWARD)

23. Agency.—Nature of relation; appointment; liabilities of principal for agent's torts, contracts, crimes; liabilities of agent; parties to writings; undisclosed principal doctrines; delegation of agency, termination; ratification. Prerequisites: first semester of courses 18 and 20. Open to pre-legal students having 75 units of credit and to all law students. Reinhard, Cases on Agency.

4 units, 2d semester (HUSTON)

24. Partnership.—Nature of a partnership, its purposes, and members; creation of partnerships; nature of partner's interest; firm name and good will; mutual rights and duties of partners; actions between partners, at law and in equity; powers of partners; liability for acts of partners in contract and tort; general liability of partners; dissolution and notice; consequences of dissolution; dissolution agreements respecting debts; distribution of assets to creditors, and between partners; limited partnerships. Open to second- and third-year students. Gilmore, Cases on Partnership. [Given in 1911-12 and to be given in alternate years thereafter.]

3 units, 1st semester (HUSTON)

25. Private Corporations.—The nature of a corporation; the formation and organization of corporations; irregular incorporation; corporate powers; ultravires; promoters; directors; shareholders; creditors; stock, issue and payment, transfer. Open to third-year law students only. Warren, Cases on Corporations, and selected California cases. 4 units, 1st semester (HUSTON)

26. Public Service Companies and Carriers.—The nature, rights, and duties of public calling as exemplified by railway, telegraph, telephone, gas, water, irrigation, and other public service companies. Common carriers of goods and persons; liability; limitation of liability; bills of lading; stoppage in transitu; connecting carriers; tickets; baggage, compensation and lien. Open to second- and third-year law students. [Given in 1911-12 and to be given in alternate years there-

after.] Wyman, Cases on Public Service Companies (2d ed.); also selected cases on carriers. 3 units, 2d semester (CATHCART)

27. **Bankruptcy.**—Jurisdiction of the United States and the States; who may be a bankrupt; who may be petitioning creditors; acts of bankruptcy; where property passes to the trustee; provable claims; protection; exemptions and discharge. Open to second- and third-year law students. [Given in 1911-12 and to be given in alternate years thereafter.] Lectures and assigned reading.
2 units, 1st semester (WOODWARD)

28. **Insurance.**—Marine, fire, and life insurance. Insurable interest in various kinds of policies; concealments; misrepresentations; warranties and other matters affecting the validity of the contract; amount of recovery; subrogation; waiver, estoppel, election; powers of agents; assignees and beneficiaries. Open to second- and third-year law students and to others by special permission. [Given in 1911-12 and to be given in alternate years thereafter.] Wambaugh, Cases on Insurance. 3 units, 2d semester (HUSTON)

29. **Suretyship.**—Personal suretyship compared with real suretyship (mortgages, pledges, liens, etc.); suretyship obligations compared with insurance and indemnity obligations; guaranty and other forms of suretyship in relation to the Statute of Frauds; suretyship in transactions involving negotiable instruments; fidelity contracts and judicial bonds; surety's defenses due to original defects in his obligation or to its subsequent discharge; surety's right to subrogation, indemnity, contribution or exoneration; creditor's right to surety's securities. This course must ordinarily precede that on Mortgages. Open to second- and third-year law students. [Given in 1911-12 and to be given in alternate years thereafter.] Ames, Cases on Suretyship.
3 units, 2d semester (WOODWARD)

30. **Mortgages.**—All forms of mortgage security, both real and chattel; essential elements of legal and equitable mortgages; legal and equitable rights, powers and remedies of mortgagor and mortgagee with respect to title, dower, curtesy, possession, rents and profits, waste, collateral agreements, foreclosure, redemption; priorities; marshaling; extension of mortgages; assignment of mortgages; discharge of mortgages. This course must ordinarily be preceded by that on Suretyship. Open to second- and third-year law students. [To be given in 1913-14 and in alternate years thereafter.] Kirchwey, Cases on Mortgage. 3 units, 2d semester (HOHFELD)

31. **Equity I.**—Historical development of equity; relation between equitable rights and powers and legal rights and powers; general principles relating to jurisdiction, procedure and remedies; specific performance of contracts with special emphasis on the relations between vendors and purchasers of realty; introduction to mortgages; bills for an account; specific reparation and prevention of torts, including waste, trespass, nuisance, disturbance of easements, infringement of patents and copyrights, interference with business relations. Open to pre-legal students having 75 units of credit, and to all law students. Ames, Cases in Equity Jurisdiction, Vol. I.

4 units, 1st semester (SMITH)

32. **Equity II: Trusts.**—Trusts considered in comparison with other equitable and legal relations; nature and requisites of trusts with respect to consideration, subject-matter, the trustee, the *cestui que trust;* sufficiency of language in wills and deeds creating trusts; kinds of trusts; express, constructive, and resulting trusts, private and charitable trusts; transfer of the respective interests of trustee and *cestui que trust* by act of party and by marriage, death, etc.; rights and remedies of creditors of trustee and *cestui que trust;* priorities with respect to trusts and other equitable interests; resignation or removal of trustee; duties of trustee as to general execution of the trust and as to investment of the trust funds. Open to second- and third-year law students. [To be given in 1912-13 and in alternate years thereafter.] Ames, Cases on Trusts (2d ed.); also selected cases.

4 units, 1st semester (HOHFELD)

33. **Equity III.**—Interpleader; bills of peace and *quia timet;* cancellation of contract; clouds on title; perpetuation of testimony; rights of future enjoyment; reformation and rescission of contract; mistake, fraud, misrepresentation; duress and undue influence. Open to second- and third-year law students. [To be given in 1913-14 and in alternate years thereafter.] Ames, Cases in Equity Jurisdiction, Vol. II.

2 units, 2d semester (HOHFELD)

34. **Damages.**—Respective functions of court and jury in estimating damages; exemplary, liquidated, nominal, direct, and consequential damages; avoidable consequences; counsel fees; certainty, compensation, damages for non-pecuniary injuries; value; interest; and damages in certain actions of tort and contract. Open to second- and third-year law students. [Given in 1911-12 and to be given in alternate years thereafter.] Beale, Cases on Damages (2d Ed.).

2 units, 2d semester (CATHCART)

35. **Pleading.**—*Part I.* A general survey of the common law, equity, and code systems of pleading, based upon lectures, assigned readings, and a study of selected forms. *Part II.* An intensive case study of the fundamental principles of pleading: the statement of a cause of action; demurrers, general and special; default; negative answers or pleas by way of traverse; affirmative answers or pleas in confession and avoidance; dilatory pleas; several pleas; replies or replications; departure; new assignment; amendment of pleadings; set-off and counterclaim; motions based on the pleadings; error and appeal on the pleadings. Open to second- and third-year law students. Ames, Cases on Pleading (2d ed.); also selected cases.

4 units, 1st semester (CATHCART)

36. **Evidence.**—Respective functions of judge and jury; "law and fact"; presumptions; burden of proof; judicial notice; classification of evidence; relevancy as primary test of admissibility; principles and rules relating to the following: misleading or unimportant matters, character, admissions, confessions, hearsay, witnesses' opinions and expert testimony, real evidence, evidence relating to execution, contents and interpretation of writings; various rules of substantive law stated in terms of "parol evidence rule"; competency of witnesses; privilege of witnesses; impeachment and confirmation of witnesses; examination of witnesses. A few extra sessions will be held for the purpose of affording actual practice in the presentation of evidence and the examination of witnesses. Open to students having 31 units of credit toward the J. D. degree. Thayer, Cases on Evidence (2d ed.); also selected cases.

4 units, 2d semester (SMITH)

37. **California Practice.**—Organization and jurisdiction of courts; court records and files; proceedings prior to judgment, including: service and return of summons and motions relating thereto, appearances, provisional remedies, such as attachment, arrest, etc., *lis pendens*, the trial, exceptions and findings, verdict; the judgment, its entry and satisfaction; proceedings subsequent to judgment, including: stay of execution, costs, execution, motion for new trial, appellate proceedings; probate and administration proceedings; special proceedings, including writs of *certiorari*, mandamus, and prohibition; introduction to jurisdiction and procedure of Federal courts. Prerequisite: course 35. Open to students having 43 units toward the J. D. degree. California Code of Civil Procedure; also selected California cases.

2 units, 2d semester (CHARLES)

The Summer Term

The Summer Term of the Law School for the year 1911 opened Wednesday, May 31st, and continued for eight weeks, closing Tuesday, July 25th.

The following courses were given:

10a. Persons and Domestic Relations.—Identical with course 10 in the regular curriculum. Given during the second half of the term. Woodruff, Cases on Domestic Relations (2d ed.).
2 units (Woodward)

16a. Water Rights and Irrigation Law.—Identical with course 16 in the regular curriculum. Selected cases and legislative enactments.
3 units (Bingham)

17a. Mining Law.—Identical with course 17 in the regular curriculum. Selected cases and legislative enactments.
2 units (Bingham)

19a. Quasi-Contracts.—Course 19 in the regular curriculum, somewhat abridged. Given during the first half of the term. Woodruff, Cases on Quasi-Contracts.
2 units (Cathcart)

23a. Agency.—Course 23 in the regular curriculum, somewhat abridged. Huffcut, Cases on Agency. 3 units (Huston)

28a. Insurance.—Course 28 in the regular curriculum, somewhat abridged. Richards, Cases on Insurance.
2 units (Huston)

Instruction in Practice

A special effort is made to impart to the student a thorough knowledge of the rules of procedure and practice, and to enable him to acquire a cerditable degree of skill and facility in the application of such rules to conditions of actual litigation. To these ends, courses are offered in Common Law, Equity and Code Pleading, and in California Practice. In the last-mentioned course particularly the student is afforded practical experience in the commencement of actions, the preparation of pleadings, the trial of issues of fact, and the argument of questions of law. Likewise, in connection with the course in Evidence, extra sessions of the class are held for the purpose of exemplifying the actual methods of introducing evidence and examining witnesses.

Moot Courts

Three law clubs—Bench and Bar, Abbott's Inn, and Arcade—have been organized by the students for the purpose of holding moot courts for the argument of questions of law. This work is voluntary, but is carried on with the advice and assistance of the Faculty. Moot courts are also conducted by the local chapters of the Phi Delta Phi and Delta Chi fraternities.

Public Speaking

Courses in the principles of vocal expression in public speaking, and in oral debate, offered by the University, may be elected by students in Law. Law students are eligible to membership in the two debating societies of the University. They may compete for the Carnot Debate medal, and for positions on the University Intercollegiate Debate team.

Admission to the Bar

It is provided by Section 280*b* of the California Code of Civil Procedure, that any person producing evidence of having satisfactorily completed the three years' course of law study prescribed by this Law School, shall be entitled to a license to practice law in all the courts of the State, subject to the right of the chief justice of the Supreme Court to order an examination, as in ordinary cases of applicants without such evidence. The certificate required by the statute will be issued, upon request, to any regular or special student who shall have received an aggregate of 75 units of credit in the Law School, including credit in Pleading and California Practice and excluding credit in the course in Introduction to the Study of Law, and who, in addition thereto, shall have received credit in the course in English Composition (English 2).

General Regulations

To receive credit in any course in the Law School, a student must obtain a minimum grade of fifty per cent in classroom work and also in the written examination held at the end of the course. His average for the two must reach sixty per cent. In estimating this average the final examination will count two-thirds and the classroom work one-third. The right to take the final examination is conditioned on regular attendance and the maintenance of the required grade for class work.

A student whose average standing is between fifty and sixty will be given a *condition* and one whose grade is below fifty will be given a

failure. A *condition* requires a re-examination and a *failure* a repetition of the entire course. No special examinations will be given to remove conditions except in the case of a student in the senior year of the pre-legal curriculum. If such student should incur a condition in one of the required law courses during the first semester of that year he may on petition be granted a re-examination at the end of the second semester, if the condition is the only obstacle in the way of his graduation. For such examination he must pay a special fee of five dollars. In all other cases examinations to remove conditions may be taken only at the regular examination period for the particular course.

No student may register for more than fifteen hours of law per week. A student may register as visitor in any course in which he is entitled to register as a regular student, provided that such registration shall not give him more than fifteen hours of law.

Fees and Expenses

For professional law courses tuition fees are charged as follows: to students registering for thirteen or more units in law in any semester, twenty-five dollars per semester; to students registering for less than thirteen units in law in any semester, two dollars per unit per semester. For courses taken in the Summer Term the tuition fee is four dollars per unit.

All undergraduate students in the University are charged an incidental fee of fifteen dollars per semester; but in the case of undergraduates who are taking law courses, the incidental fee, or such portion thereof as may be required, is applied in payment of the charge for tuition.

A syllabus fee of fifty cents per semester is charged in all law courses except Pleading and California Practice. In Pleading the syllabus fee is one dollar; in California Practice, three dollars. A diploma fee of five dollars is payable before graduation.

The cost of text-books in the law courses will average twenty-five dollars per year for the three years of the professional curriculum.

GRAPHIC ART

Arthur Bridgman Clark, Associate Professor.
†Robert Bartholow Harshe, Assistant Professor.
Chloe Lesley Starks, Henry Varnum Poor, Instructors.

The Department aims to meet the needs of three classes of students: students who wish training in artistic perception and graphic expression for its general culture value; students who wish to begin professional art study while receiving other university training; and technical students to whom knowledge of representative drawing is essential.

Course 1 or its equivalent must precede all other courses excepting courses 6, 8, and 9. Technical courses may receive credit a second time when continued with sufficient skill.

For students making Graphic Art their major study the following is an average programme: Elementary Still Life (4 units), or Still Life (2 units); Landscape (3 units); Organic Form (5 units); Perspective (2 units). Total, 11 units the first year.

Design (8 units); Cast drawing or Landscape (5 units); Lectures (2 units). Total, 15 units the second year.

Life (5 units); Color (5 units); Teachers' course (3 units); Handicraft (2 units). Total, 15 units the third year.

Illustration or Landscape (10 units); Handicraft (2 units). Total, 12 units the fourth year.

The Teachers' Recommendation.—The minimum requirement for the High School recommendation in Drawing is courses 1, 2 or 4, and 7 (3 units each), also 10 and 11. Total, 18 units.

1. Elementary Drawing.—Introductory course; still-life in charcoal and color. Open to all students.

2 to 4 units, either semester (Starks)

2. Drawing of the Head.—From the cast.

3 to 5 units, either semester (Poor)

3. Drawing of the Head.—A continuation of course 2 from life. Open to second-year students.

3 to 5 units, either semester (Poor)

4. Color.—Still-life painting in oils or water-colors. Open to students with six units of drawing.

2 to 5 units, either semester (Poor)

†Absent on leave, 1911-12.

5. **Landscape.**—Chiefly outdoor work, but supplemented during the colder weather by study from photographs. The pen, charcoal, or brush are used in accordance with the capacity and needs of each student. 3 units, 1st semester (Clark)

6. **Lectures.**—Ideals and processes in pictorial and applied art. Open to all students.
2 units, 1st semester or both semesters (Clark)

7. **Organic Form.**—Drawing shells, leaf sprays, animal forms, and landscape with reference to decorative elements. The course is conducted primarily as a preparation for design.
3 to 5 units, 2d semester (Clark)

8. **Scientific Perspective.**—A series of problems involving the mathematical principles of perspective, and the application of these principles to actual buildings and objects. [Course 8 is offered in alternate years; to be given in 1912-13.]
2 units, 2d semester (Clark)

9. **Science Drawing.**—A course designed to assist students in scientific illustration. It includes the drawing of simple scientific subjects in pen outline, line and stipple shading, wash, and line and wash. Especial attention will be paid to the needs of individual students. Open to science students on advice.
2 units, either semester (Starks)

10. **Teachers' Course.**—For intending teachers and supervisors of drawing. Consisting of lectures upon methods and aims in school curricula and in the practical work of preparing courses of study. Open to advanced students only. [Offered in alternate years; to be given in 1912-13.] 3 units, 2d semester (Clark)

11. **Design.**—Exercises in the principles of abstract design, decorative design, and structural design. Application of the principles to house planning, interior household fittings, and the handicrafts generally. 3 units, both semesters (Clark)

12. **Illustrating.**—Practice in design and appreciation of the book arts, including title-pages, book-plates, borders, announcements, head- and tail-pieces, and illustrations. Must be preceded by course 3.
2 to 3 units, both semesters (Poor)

13. **Handicraft.**—Exercises in textiles, copper, jewelry, leather, and pottery. To follow course 11.
2 units, either semester (Clark)

MATHEMATICS

ROBERT EDGAR ALLARDICE, RUFUS LOT GREEN, Professors.
HANS FREDERICK BLICHFELDT, Associate Professor.

The courses in this department have been arranged to meet the wants of two classes of students—students whose major subject is Mathematics, and students who, while taking their major in some other department, desire to include some mathematics in their course. Students in Engineering are provided for in the Department of Applied Mathematics.

For students whose major subject is Mathematics the following programme of work is recommended: In the first year, courses 3 and 4; in the second year, courses 9, and 10 or 21; in the third year, courses 11, 12, and 15; while the work during the fourth year and for graduate students may be selected from the remaining courses, and from the Department of Applied Mathematics. The advanced courses will, for the most part, be given once in two or once in three years, and it is hoped that the advanced students will thus have the opportunity of studying the more important branches of modern mathematics.

Students whose major subject is Mathematics are recommended to begin the study either of French or of German in their freshman year.

Students who desire to take one or more years of Mathematics as a part of a liberal training are recommended to begin their work in this Department with one or more of the courses 1, 2, 3, 6, and 7.

The Teacher's Recommendation.—For the High School recommendation in Mathematics the following courses are required: 1, 2, 3, 4, 9, and 10 or 6.

1. **Trigonometry.**—Elementary course, with applications involving logarithmic calculation.

2 units, 1st semester (BLICHFELDT)

2. **Solid Geometry.**—Elementary course.

2 units, 2d semester (BLICHFELDT)

3. **Algebra.**—Fundamental laws, degree, symmetry, indeterminate coefficients, remainder theorem, factors, complex numbers, introduction to theory of equations, progressions, permutations and combinations. Presupposes entrance credit in Elementary Algebra.

5 units, 1st semester (GREEN)

4. Co-ordinate Geometry.—An elementary course in the analytic geometry of the conic sections, including the discussion of the general equation of the second degree. Presupposes course 3.

5 units, 2d semester (GREEN)

[Students making Mathematics their major subject should take courses 3 and 4 as the first year's work, and those who have not had trigonometry should also take course 1.]

6. Plane Geometry.—This course includes a rapid revision of elementary geometry, together with additional theorems and references to modern theories. It is recommended to those who expect to teach mathematics, and presupposes entrance credit in plane geometry.

2 units, both semesters (ALLARDICE)

7. General Course.—A brief and elementary survey of the principles of algebra, trigonometry, co-ordinate geometry, and calculus. Presupposes elementary algebra and plane geometry.

3 units, both semesters (BLICHFELDT)

9. Differential and Integral Calculus.—Lectures on the Differential and Integral Calculus, with applications to the theory of plane curves, on the lines of Williamson's treatises.

3 units, both semesters (ALLARDICE)

10. Advanced Co-ordinate Geometry.—A continuation of course 4, including the elements of the Theory of Determinants.

2 units, both semesters (GREEN)

11. Advanced Calculus.—A continuation of course 9.

3 units, 1st semester (ALLARDICE)

12. Theory of Functions.—Elementary course.

3 units, 2d semester (ALLARDICE)

13. Non-Euclidean Geometry.—Presupposes a course in Calculus.

2 units, 2d semester (BLICHFELDT)

14. Modern Co-ordinate Geometry.—

3 units, 2d semester (GREEN)

15. Differential Equations.—

3 units, both semesters (BLICHFELDT)

16. Definite Integrals.—[Not given in 1911-12.]

3 units, 2d semester (ALLARDICE)

17. Solid Co-ordinate Geometry.—[Not given in 1911-12.]

2 units, both semesters (ALLARDICE)

19. Reading Course.—In this course the students will read French and German text-books under the direction of the instructors
2 units, both semesters (ALLARDICE, BLICHFELDT)

20. Theory of Groups.—[Not given in 1911-12.]
2 or 3 units, 1st semester (BLICHFELDT)

21. Projective Geometry.—
2 units, both semesters (ALLARDICE)

APPLIED MATHEMATICS

LEANDER MILLER HOSKINS, Professor.
HALCOTT CADWALADER MORENO, SIDNEY DEAN TOWNLEY, Associate Professors.
WILLIAM ALBERT MANNING, ERNEST WILLIAM PONZER, Assistant Professors.

Under Applied Mathematics are included the courses in mathematics which are required of students in Engineering. The aim is to make these courses practical in the sense of furnishing thorough drill on fundamental principles and much practice in their application. Emphasis is laid upon accuracy and system in the solution of numerical problems. Students whose training in arithmetical work has been deficient, or who are otherwise inadequately prepared, or who lack aptitude for mathematical study, can not pursue these courses successfully.

Courses A and B are the equivalents of the corresponding entrance subjects (5 and 6), and are prerequisites to the regular first-year work.* Course 1 embraces the regular first-year work, and courses 2 and 3 the regular second-year work. Students deficient in the work of the first year are not admitted to second-year courses. This requirement will be strictly enforced, whether the previous work has been taken in this University or elsewhere.

A. Solid Geometry.—This presupposes plane geometry, and is not required of those having entrance credit in solid geometry (subject 5). 2 units, 1st semester (MANNING)

---

*It is not intended to offer these courses permanently, but a year's notice will be given of their withdrawal.

B. Trigonometry.—This is equivalent to entrance subject 6, and is not open to students having entrance credit in this subject. Plane geometry is a prerequisite. 3 units, 2d semester (MANNING)

1. First-year Mathematics.—This course embraces (*a*) Algebra, (*b*) Trigonometry, (*c*) Co-ordinate Geometry, approximately equal periods being given to the three subjects. The work begins with a rapid review of Elementary Algebra, intended to test the student's familiarity with fundamental principles and operations, those showing deficient preparation not being permitted to continue. This review is followed by more advanced work in Algebra, but emphasis is laid on the thorough mastery of the ordinary rules rather than on covering a large amount of ground. In the second part of the course much attention is paid to reviewing and enforcing the fundamental principles of Plane Trigonometry, and especially to the numerical solution or triangles using both natural and logarithmic functions. In Co-ordinate Geometry it is aimed to familiarize the student with the method of co-ordinates, so that he can apply it independently to simple problems, rather than to devote much attention to a detailed study of the properties of the conic sections or other curves. The course is open to students having entrance credit in Elementary Algebra, Plane and Solid Geometry, and Plane Trigonometry.

5 units, both semesters (MORENO, MANNING, PONZER)

2. Calculus.—An elementary course on Differential and Integral Calculus, in which emphasis is laid on fundamental principles and simple applications.

3 units, both semesters (TOWNLEY, MANNING, PONZER)

3. Theoretical Mechanics.—An elementary course, covering the fundamental principles of Statics, Kinematics, and Kinetics, restricted mainly to coplanar forces and to plane motion of particles and of rigid bodies. An elementary treatment of Graphic Statics is included. The course is designed as a preparation for the courses in Applied Mechanics taken by students of Engineering, but is open to all whose preparation includes the equivalent of course 1. Calculus must either precede this course or be taken at the same time.

5 units, both semesters (HOSKINS, MORENO, TOWNLEY)

In addition to the foregoing, which are required of all students of Engineering, the following elective courses are offered:

4. Adjustment of Observations.—Theory of the method of least squares, with applications. Credit in course 2 or its equivalent is a

prerequisite. [Given if warranted by the demand. Not given in 1911-12.] 2 units, 2d semester

5. General Astronomy.—This course consists of a general survey of the various branches of astronomy, including a study of the celestial sphere, the bodies of the solar system, comets, the fixed stars, and other heavenly bodies. The treatment is essentially non-mathematical.

3 units, 1st semester (TOWNLEY)

5a. Practical Astronomy.—The theory and practice of the determination of latitude, azimuth, time, and longitude. Intended especially to meet the requirements of students of civil engineering. Course 1, differential calculus, and surveying are prerequisites.

3 units, 2d semester (TOWNLEY)

Additional courses in Practical Astronomy and in Geodesy may be arranged for students qualified to pursue them to advantage.

6. Graduate Courses.—Advanced courses in Theoretical Mechanics, Hydromechanics, Theory of the Potential Function, Theory of Elasticity, or other subjects, may be arranged for students having the requisite mathematical training. During 1911-12 a course in the Partial Differential Equations of Mathematical Physics was given by Professor MORENO.

PHYSICS

FERNANDO SANFORD, Professor.
FREDERICK JOHN ROGERS, Associate Professor.
ELMER REGINALD DREW, JOSEPH GRANT BROWN, Assistant Professors.
PERLEY ASON ROSS, Instructor.

Courses 1, 2, 3, 4, and 5 constitute a course in General Physics, and are intended to precede the advanced courses.

1. Dynamics.—Including hydrostatics and pneumatics. Open only to students who have had Algebra and Plane Geometry. Required as a preparation for each of the courses following (except 6 and 7). One lecture and two laboratory periods per week.

3 units, either semester (ROSS)

2. Electricity and Magnetism.—One lecture and two or three laboratory periods per week. Prerequisite: course 1, or its equivalent.

3 or 4 units, 1st semester (DREW)

3. Heat.—One lecture and two laboratory periods per week. Prerequisite: course 1. 3 units, 2d semester (Ross)

4. Sound.—Including wave-motion. One lecture and two laboratory periods per week. Prerequisite: course 1, and Trigonometry. 3 units, 1st semester (Brown)

5. Elementary Optics.—Three laboratory periods per week. Prerequisites: course 1, and Trigonometry. 3 units, 2d semester (Brown)

6. Engineering Physics.—Intended especially for students in Mechanical and Electrical Engineering. Three experimental lectures and recitations and one laboratory period per week. Prerequisite: entrance Physics, and course 3 in Applied Mathematics, or may be taken concurrently with Theoretical Mechanics.

a. Heat, Light, and Sound. 4 units, 1st semester (Brown)

b. Electricity and Magnetism. 4 units, 2d semester (Rogers)

7. Physics for Students of Biology.—A general, non-mathematical course in Physics intended especially for students in Biological Science and students preparing for the study of Medicine. Two lectures and two laboratory periods per week throughout the year. 4 units, both semesters (Drew)

8. Mechanical Measurements.—A course in exact measurements of mass, length, time, and gravity, using balance, dividing engine, cathetometer, chronograph, etc. Two laboratory periods per week. Prerequisite: course 1. 2 units, 2d semester (Brown)

9. Electrical Measurements.—Open to students who have taken course 2 or course 6*b*. 4 units, 1st semester. (Rogers)

9a. Photometry and Illumination.—Open to students who have completed course 9. 1 unit, 2d semester (Rogers)

10. Advanced Optics.—Two laboratory periods per week. Prerequisite: course 5. 2 units, 2d semester (Sanford)

11. General Physics.—Lectures. Prerequisites: courses 1, 2, 3, 4, and 5, or their equivalent. 5 units, both semesters (Sanford)

12. Analytic Mechanics.—Lectures. Prerequisites: course 1 and the Differential and Integral Calculus. 4 units, 2d semester (Drew)

13. Teachers' Course in Elementary Physics.—Prerequisites: courses 1, 2, 3, 4, and 5, or their equivalent.
1 unit, both semesters (SANFORD)

14. Advanced Heat.—Lectures on selected topics, including the elements of Kinetic Theory and Thermodynamics. Prerequisites: courses 1 and 3, and Calculus. 3 units, 2d semester (DREW)

15. Vibratory Motion.—Recitations and lectures illustrated by occasional lecture experiments and a few carefully executed laboratory experiments. A knowledge of Differential and Integral Calculus is required. 3 units, 1st semester (ROGERS)

16. Physical Theory of Electricity.—
1 unit, 2d semester (SANFORD)

17. History of Physics.—Lectures and readings on the history of physical science with special reference to the development of theories. Prerequisites: courses 1, 2, 3, 4, and 5.
2 units, 2d semester (ROGERS)

18. Advanced Electricity.—Recitations and lectures illustrated by occasional lecture experiments and a few carefully executed laboratory experiments. Prerequisites: courses 2 or 6*b*, 9, and calculus.
4 units, 1st semester (ROGERS)

19. Investigation of Original Problems in the Laboratory.—Hours to be determined in each case. (SANFORD)

For graduation in the department the minimum requirement is 40 hours of Physics and Chemistry, of which at least 30 hours must be Physics. All elementary courses except 6 and 7 are suitable for Physics majors.

The Teacher's Recommendation.—The minimum requirement is courses 1, 2, 3, 4, 5, or an equivalent, and course 13.

Laboratory Fees.—Courses 1, 2, 3, 4, 5, 7, and 8, $4 each per semester; course 6*a* and 6*b*, $3 each, per semester; course 9, $5 per semester; course 19, $2 per unit per semester.

CHEMISTRY

John Maxson Stillman, Lionel Remond Lenox, *Edward Curtis Franklin, Stewart Woodford Young, Robert Eckles Swain Professors.

John Pearce Mitchell, Assistant Professor.

William Henry Sloan, Harry Johnson Sears, George Shambaugh Bohart, Instructors.

Alice Ruth Berger, Acting Instructor.

†Thomas Meredith Cramer, ‡Robert John Cross, Charles Merrill Fulkerson, Win Rawdon Goddard, Ben Merrill Hawes, John Stephen Horn, †Eloise Jameson, Robert Alton Jones, William Noble Lacey, Charles Kirkton McWilliams, Helen Nagel, †Ralph Carleton Pollock, Assistants.

I. Lecture Courses

1. General Inorganic Chemistry.—Comprising a systematic treatment of elementary principles and of the properties of the more important elements and their compounds. Open to all students. Those not having entrance credit in Chemistry will register in a three-hour section for the first semester and in laboratory course *a*I.

2 or 3 units, 1st semester; 2 units, 2d semester (Mitchell)

2. Principles of General and Inorganic Chemistry.—Discussion of the elements of chemical theories and of important generalizations in the field of inorganic chemistry. Open to all students who have completed courses in 1 and *a*II.

3 units, both semesters (Stillman)

3. Organic Chemistry.—Lectures and reviews on the chemistry of carbon compounds. Open to students who have completed courses 1 and *a*. 2 units, both semesters (Swain)

[A condensed course in organic chemistry is offered for students in medicine. See Department of Medicine, Division of Chemistry, course 1.]

4. Industrial Chemistry.—Lectures on fuels, water, acid and alkali manufacturing, explosives, sugar-making and refining, petroleum.

*Absent on leave, 1911-12.
†First semester only.
‡Second semester only.

Open to students who have completed courses 2 and 3; or may be taken concurrently with course 3.

2 units, both semesters (STILLMAN)

5. **History of Chemistry.**—Open to students who have completed courses 2 and 3. [Not given in 1912-13.]

2 units, 1st semester, in alternate years (STILLMAN)

6. **Qualitative Analysis.**—In connection with laboratory course *b*. 1 unit, either semester (LENOX)

7. **Advanced Organic Chemistry.**—Advanced topics in organic chemistry, including stereochemistry. Open to students who have completed courses 2 and 3. [Not given in 1912-13.]

2 units, both semesters, in alternate years (FRANKLIN)

8. **General Physical Chemistry.**—Lectures covering as far as possible the whole field of physical chemistry. Open to students who have completed courses 2 and *d* in Chemistry, courses 3 and 9 in Mathematics, and course 1 in Physics (course 2 being also recommended).

3 units, both semesters (YOUNG)

9. **Physical-Chemical Measurements.**—An informal course of lectures given as needed in connection with course *f*.

No credit (YOUNG)

10. **Applied Physical Chemistry.**—For students in Analytical Chemistry and Metallurgy. 2 units, 2d semester (YOUNG)

11. **Physiological Chemistry.**—Lectures on the chemical composition and action of the tissues and secretions of the animal body, the digestion of foods, and the elimination of waste products. Open to students who have completed course 3, and Physiology 1 or its equivalent. 3 units, 1st semester (SWAIN)

12. **Seminary in Chemistry.**—Discussion of assigned topics in theoretical and general chemistry. Open to graduate students, and to advanced undergraduates in Chemistry, with the approval of the Faculty in Chemistry. 1 unit, both semesters

II. LABORATORY COURSES

a. **General Inorganic Chemistry.**—In connection with course 1

a 1. Illustrating fundamental laws and principles of elementary chemistry, for students who have not received entrance credit in Chemistry. 2 units, 1st semester (MITCHELL, SEARS)

*a*II. Inorganic preparations and general chemistry. For students who either have completed *a*I or have received entrance credit in Chemistry. 2 units, either semester (MITCHELL, SEARS)

b. Qualitative Analysis.—Open to students who have completed courses 1 and *a*II.

3 afternoons, either semester (LENOX, BERGER)

c. Preparation of Typical Carbon Compounds.—Open in connection with course 3 to students who have completed course *b*.

3 afternoons, either semester (SWAIN, BOHART)

d. Quantitative Analysis.—Training in manipulation in gravimetric and volumetric methods. Work begins either semester. Students in other departments than Chemistry may register for three afternoons if they can not arrange for four, as is recommended. Open to students who have completed courses 6 and *b*.

4 afternoons, either semester (SLOAN)

e. Mineral Analysis.—Systematic analysis of representative minerals. Open to students who have completed course *d*, and required of students whose major subject is Chemistry, unless *f* or *g* be elected instead.

4 afternoons, either semester (STILLMAN, LENOX, SLOAN)

f. Physical-Chemical Measurements.—Exercises in the practice of physical-chemical laboratory methods. Open to students who have completed or are taking course 8, and who have completed course *d*.

3 or 5 units, either semester (YOUNG)

g. Physiological Chemistry.—A laboratory course including a preliminary study of the proteins, carbohydrates, and fats, and the action of the various digestive fluids upon them, followed by a chemical examination of the bile, blood, milk, the chief tissues of the animal body, and the excretions. In connection with course 11.

3 afternoons, 1st semester (SWAIN)

h. Assaying.—Open to students who have completed course *d*. 3 afternoons, either semester (LENOX)

i. Physical-Chemical Laboratory.—A course recommended in connection with Chemistry 10. (YOUNG)

k. Analytical Chemistry.—A condensed course intended exclusively for students preparing for medicine. Not open to chemistry majors, and not accepted in place of the regular courses in qualitative and quantitative analysis as prerequisites for advanced laboratory

courses, with the exception of physiological chemistry for medical students.

ka. Qualitative Analysis—Brief course. Credit deferred until *kb* is also completed. 2 units (LENOX)

kb. Quantitative Analysis.—Brief course. 2 units (SLOAN)

Course *k* (*a* and *b*) must be registered at the same time—for four units total credit.

[Students preparing for Medicine who have, however, already completed the regular course in Qualitative Analysis (6 and *b*), may register for *kb* for two hours credit.]

In 1912-13 the course *kb* must be begun by March 10th. The class will be expected to finish *ka* by that date. 4 units, 2d semester

x. Advanced and Special Courses in laboratory work and research work are open to students who have completed necessary prerequisites, by arrangement with professors of the Department and with reference to the particular aims and ambitions of the students. Such advanced or special subjects are, for example: special methods in mineral analysis, iron and steel analysis; special methods in assaying; water analysis; food analysis; urine analysis; elementary organic analysis; special organic preparations; analysis of sugar, toxicology, etc.

Qualified students may also pursue investigations of problems in inorganic, organic, physical, analytical, or physiological chemistry under the direction of any professor with whom arrangement is made.

For all such advanced, special, or research work, students will register and enroll under *x*, giving name of professor under whom the work is to be carried on, and for such number of units of credit as may be agreed upon.

Candidates for the degree of Bachelor of Arts in Chemistry may select any one of the four following curricula (A, B, C, D), the requirements of the Department being as follows:

A. GENERAL CHEMISTRY

FIRST YEAR:—Chemistry 1, *a*; Physics 1; Mathematics 3; German 1.
SECOND YEAR:—Chemistry 2, 6, *b*; Mathematics 9; German 2*a*.
THIRD AND FOURTH YEARS:—Chemistry *d*, 3, *c*, 8, *f*.

Recommended for all who are studying the science of chemistry for its own sake or for the profession of teaching.

B. Analytical Chemistry

First Year:—Chemistry 1, *a;* Physics 1; German 1.

Second Year:—Chemistry 2, 6, *b;* Geology 1, 2; German 2*a*.

Third and Fourth Years:—Chemistry *d, e c, h,* 3, 10; Geology 5.

Particularly adapted to students who are looking forward to the career of analytical chemist and assayer.

C. Medical or Sanitary Chemistry

First Year:—Chemistry 1, *a;* Physiology 1; German 1.

Second Year:—Chemistry 2, 6, *b;* Physics 7; German 2*a*.

Third and Fourth Years:—Chemistry 3, *c, d,* 11, *g*.

Particularly adapted to students who are looking forward to medical education or to sanitary chemistry.

D. Chemical Engineering

This curriculum comprises four years of the necessary five years' work leading to the advanced degree of *Engineer* in Chemical Engineering. Candidates in this course receive the degree of A. B. in Chemistry upon completion of the following requirements:

First Year:—Chemistry, 1, *a;* Applied Mathematics A, B, 1; German 1.

Second Year:—Chemistry 2, 6, *b, d;* Applied Mathematics 2, 3.

Third Year:—Chemistry 3, *c;* Engineering 1*a*, 1*b*, 2; Physics 1, 2 (or 6*a* and 6*b*); German 2*a*.

Fourth Year:—Chemistry 4, *e* (or *h*); Mechanical Engineering 11, 13; Metallurgy 9; Engineering 3*a*.

Intended particularly for students who are working toward the degree of Chemical Engineer and who desire to fit themselves for positions of responsibility in connection with the administration of industries involving chemical knowledge and skill.

Advanced Degrees

Applicants for the degree of *Master of Arts* in Chemistry will be expected to complete, in addition to the requirements for the bachelor's degree, the equivalent of thirty units' work in the University—of which approximately two-thirds must be in the Department. This work will include a thesis based on laboratory work, and Chemistry 8 and *f*, if not included in the undergraduate work.

Candidates for the advanced degree of *Engineer* in Chemical Engineering will be required to complete, in addition to the requirements for the A. B. degree specified under course D: Mechanical Engineering 14, 31, 24, 36, Chemistry 8, and a thesis based on laboratory work. Electrical Engineering 1 is advised, if possible, though not required. It is estimated that these requirements may be completed in one year after the completion of the requirements under Course D.

Candidates for the degree of *Doctor of Philosophy* in Chemistry, after the completion of the equivalent of the requirements for Master of Arts or Engineer, will follow such courses as are approved by the Department faculty, subject to general University regulations.

The Teacher's Recommendation.—The minimum requirement for the high school teacher's recommendation in Chemistry is courses 1 and *a* (Elementary and General Inorganic, lectures and laboratory), the first half of course 2 (Principles of Chemistry), and either the second half of course 2, or courses 6 and *b* (Qualitative Analysis, lectures and laboratory).

Laboratory Fees.—A charge of twenty-five dollars per semester will be made to students in each laboratory course of not more than four units registration. Of this charge five dollars per semester in assaying, and ten dollars per semester in the other courses, is returnable, less bills for breakage and loss of apparatus.

BOTANY

Douglas Houghton Campbell, George James Peirce, Professors.
LeRoy Abrams, Associate Professor.
Leonas Lancelot Burlingame, Assistant Professor.
James Ira William McMurphy, Instructor.
Josephine Randall, Hally D. M. Jolivette, Assistants.

The Department of Botany aims to provide instruction for two classes of students: (*a*) Students pursuing a liberal culture course who wish to know something of the structures, life processes, and relationships of plants and to gain some familiarity with the methods of scientific work; and (*b*) Professional students who look forward to investigation, teaching, or the technical applications of Botany in Plant Breeding, Forestry, Agriculture, Horticulture, etc. Course 1,

which presents the elements of the more important divisions of botanical study, is designed to meet the needs of both groups of students and must precede all other courses in the department, except in the case of students who have received entrance credit for its equivalent. Courses 2 to 11 are open to students who have had course 1 or its equivalent. It is the aim of these courses to give the student by means of lectures and references to the literature a general and summary account of the present state of knowledge, and in the laboratory to afford him an opportunity for a close personal acquaintance with the plants themselves. Students who have had two years' work may, after consultation, be registered in courses 12, 13, or 14. The resources of the department afford exceptional opportunity for investigation in a number of fields. Properly qualified students desiring to undertake such investigation should, after consultation with the instructor concerned, register in courses 15, 16, or 17.

Major students in the department will be expected to complete 34 units in the department, and Zoology 1. The thirty-four units should include courses 1, 2, 4, 6, 8 or 9. It is strongly recommended that courses 2 and 4 be taken in the second year.

The Teacher's Recommendation for High School Botany is based on a minimum of courses, 1, 2 or 4, 6, and 8 or 9.

Fees are charged in the various courses approximately sufficient to cover the cost of the perishable materials and syllabus used, as follows: Course 1, $2.50; courses 2, 3, 4, 5, 6, 10, 11, 12, 13, $3.00 each; course 1*a*, $1.00; courses 8 and 9, $5.00 each.

1. Elementary Botany.—Study of representatives of the principal groups of plants, with lectures upon special morphology and classification. (Campbell's University Text-Boot of Botany.)

3 units, both semesters

1st semester (Campbell, Burlingame)

2d semester (Peirce, Abrams, McMurphy)

[Short botanical excursions will be made on five Saturday mornings in each semester. Attendance on these is not required, but is desirable, and will yield an additonal half credit.]

1a. Field Botany.—Laboratory and field work in the collection and determination of flowering plants. Open to students who have had or are taking Course 1.

1 unit, last half 2d semester (Abrams)

2. **Algae.**—Lectures, reading, and laboratory work upon the special morphology and classification of the Algae.
5 units, 1st semester (CAMPBELL)

3. **Fungi.**—The laboratory work (three hours) will be devoted to morphology, development, and culture methods; the lectures to systematic relationship, with an account of economically important forms. 4 units, 1st semester (MCMURPHY)

3a. **Fungous Diseases of Plants.**—Demonstrations, laboratory and field work on the fungous diseases of plants and methods of control. (Open to students who are registered in course 3 or who have previously had it.) 1 unit, 1st semester (MCMURPHY)

4. **Archegoniatae.**—Special morphology and classification of the Archegoniatæ. Continuation of course 2.
5 units, 2d semester (CAMPBELL)

5. **Gymnosperms.**—Studies in the morphology, classification, and distribution of the group. Particular attention will be paid to the Conifers. 3 units, 2d semester (BURLINGAME)

6. **Angiosperms.**—Lectures and laboratory work on the morphology and classification of the Angiosperms. Open to students who have had course 1. 3 units, 2d semester (ABRAMS)

7. **The General Physiology of Plants.**—Lectures. Open to all.
1 unit, 1st semester (PEIRCE)

8. **Physiology.**—Laboratory work, lectures, and reading on Nutrition and Respiration. (An elementary knowledge of physics and chemistry is a desirable preliminary to this course.)
3 units, 1st semester (PEIRCE)

9. **Physiology.**—Laboratory work, lectures, and reading on Growth, Irritability, and Reproduction. (An elementary knowledge of physics and chemistry is a desirable preliminary to this course.)
3 units, 2d semester (PEIRCE)

10. **Plant Anatomy and Botanical Technique.**—Lectures and laboratory work on the anatomy of vascular plants with special reference to the adaptation of structure to function. Considerable attention will be devoted to the evidences of evolution afforded by vascular anatomy. The methods of killing, fixing, preserving, embedding, sectioning, staining, etc., will be taught in connection with the preparation of material for study in the course.
3 units (BURLINGAME)

11. Geographical Distribution and Forest Botany.—Lectures, laboratory, and field work on the trees and shrubs, and the principles of geographical distribution which they illustrate. Open to students who have had courses 1 and 1*a*. 3 units, 1st semester (ABRAMS)

12. Cytology.—Lectures and laboratory work on the plant cell; the bearings of cytology on evolution, plant breeding, etc. (Open only to those who have had courses 1 and 10; courses 2 and 3 are desirable preliminaries). 3 units, 2d semester (BURLINGAME)

13. Archegoniatae.—Advanced work in special groups. 1st and 2d semesters (CAMPBELL)

14. Taxonomy.—A critical study of some family or genus, with special reference to nomenclature and the methods of investigation. The laboratory and herbarium work will be supplemented by field work. (ABRAMS)

15. Research in Morphology.— (CAMPBELL, BURLINGAME)

16. Research in Physiology.— (PEIRCE)

17. Research in Taxonomy and Geographical Distribution.—Western America with its great diversity of climate and topography affords inumerable problems for investigation in taxonomy and plant distribution. The university collections, officially known as the Dudley Herbarium, are rich in material from this region and offer favorable facilities for the pursuit of studies along these lines. (ABRAMS)

PHYSIOLOGY AND HISTOLOGY

OLIVER PEEBLES JENKINS, FRANK MACE MCFARLAND, Professors.
CLARA S. STOLTENBERG, Associate Professor.
JAMES ROLLIN SLONAKER, Assistant Professor.
FRANK WALTER WEYMOUTH, Instructor.
ROSCOE LEROY DRAPER, KARL LUDWIG SCHAUPP, ESTHER MAY SKOLFIELD, HOWARD FRANK WEST, Assistants.

UNDERGRADUATE COURSES

1. General Anatomy and Physiology.—This course is designed to give a general view of the laws of the structure and the activity of organisms. The work will give occasion to discuss many questions of General Biology. It consists of: First, the study of the cell and its

activities as shown in the unicellular organisms, in reproductive cells, and in individual cells of many tissues; second, the study of the laws and course of development resulting in higher differentiations in structure, and specializations in function, exhibited in a selected series of organisms, both animals and plants, of increasing complexity; third, the comparative study of the physiological processes of forms placed under widely different conditions. The latter part of the course is occupied with an introduction to the embryology, anatomy, and physiology of vertebrates. (One lecture and five laboratory hours per week.)

3 units, both semesters (JENKINS, SLONAKER, WEYMOUTH)

2. **Physiology of Muscle, Blood, and Circulation.**—To be preceded by course 1. An experimental course covering the ground represented in Foster's Physiology, Part I, or Howell's Text-book on the same subjects. (One lecture and five laboratory hours per week.)

3 units, 1st semester (JENKINS, SLONAKER, SCHAUPP)

3. **Physiology of Digestion, Respiration, Elimination of Wastes, Metabolism, and Nutrition.**—Planned to follow course 2. An experimental course, with Foster's Physiology, Part II, and Howell's Text-book, as texts. (One lecture and five laboratory hours per week.)

3 units, 2d semester (JENKINS, WEYMOUTH, SCHAUPP)

4. **Anatomy and Histology of the Sense Organs.**—Dissection and study of prepared slides. Texts: Böhm-Davidoff-Huber's Histology, Quain's Sense Organs, Stöhr's Histology. One lecture and six laboratory hours per week.

3 units, 1st semester (STOLTENBERG)

5. **The Nervous System.**—A study of the structure of the central nervous system of man by means of dissections and prepared slides, supplemented by dissections of other mammalian brains. Texts: Barker's Nervous System, Edinger's Nervöse centralorgane, Johnston's Nervous System of Vertebrates, Quain's Neurology, Van Gehuchten's Système Nerveux. (One lecture and six laboratory hours per week.)

3 units, 2d semester (STOLTENBERG)

6. **Physiology of the Nervous System and Sense Organs.**—An experimental course in these subjects, requiring courses 4 and 5 as preliminary. (One lecture and five laboratory hours per week.)

3 units, 1st semester (JENKINS, WEYMOUTH)

7. **The Vertebrate Eye.**—A comparative study of the structure and physiology of the eyes of vertebrates, giving special attention to

the retina. Open to advanced students. (Lecture and laboratory work, six hours per week.) 2 units, 2d semester (SLONAKER)

8. Special Courses in Physiology.—Advanced courses open only to those who have had courses 1, 2, 3, 4, 5, and 6. They are arranged for the advanced study of selected subjects in physiology, or as a drill in the methods of research. The work will be planned for the individual student, the time varying with the exigencies of the case.

2 to 5 units, both semesters (JENKINS)

9. Histology.—The study of the structure of the cell and its general phenomena, the fundamental tissues and the outline of their development in a comparative way, occupy the first semester. In the second, the microscopic anatomy of organs, except those of the nervous system and special senses [see courses 4 and 5], is dealt with. Elementary histological technique is taught during the course. Prerequisite: course 1, or its equivalent. Physiology majors are advised to take courses 2, 3, and 9 together. During the second semester a limited number of students taking this course may register for an extra unit, which will be devoted to more extended histological technique. (One lecture and six laboratory hours per week.)

3 units, both semesters (MCFARLAND)

10. Histogenesis.—A course in advanced Histology for students who have completed courses 1 and 9, and in addition the first semester of Vertebrate Embryology (Zoology 10). It comprises the comparative study of the histogenesis of the fundamental vertebrate tissues and organs. (One lecture per week, minimum laboratory work six hours per week.) 3 units, 1st semester (MCFARLAND)

11. Neurocytology.—A comparative study of the minute structure of the nerve cell and nerve fibre, the neurone theory, and the question of functional alterations of structure during normal activity and artificial stimulation. (One lecture and at least six laboratory hours per week.) Open to advanced students.

3 to 5 units, 2d semester, in alternate years (MCFARLAND)

12. Cellular Biology.—A course in Cytology dealing with the structure and functions of the cell, with special reference to the reproductive processes in unicellular and multicellular organisms, and the theories connected therewith. Open to advanced students. (Two lectures per week, with demonstrations and laboratory work.)

3 to 5 units, 2d semester, in alternate years (MCFARLAND)

13. Special Courses in Histology.—Advanced courses in Histology, Cytology, and Microscopic Anatomy will be arranged for individual students, with a view to giving drill in methods of research. Open only to those who have had courses 1, 4, and 9.

2 to 5 units, both semesters (McFarland)

14. Journal Club.—Students in the advanced classes will be expected to meet once a week to discuss current literature in Physiology and Histology. I unit, both semesters (Department Faculty)

15. Research in Physiology or Histology.—

(Jenkins, McFarland, Slonaker, Stoltenberg)

Candidates for the Bachelor's degree who select Physiology and Histology as a major will be expected to take courses 1, 2, 3, 4, 5, 6, 9, and 14, and at least five units to be made up from the other courses offered in the Departments of Physiology or Anatomy; and in addition courses 1 and *a* in Chemistry, one year in Physics (see course 7), and the first semester in Embryology (course 11 in Zoology). Candidates for the degree of M. D. will also include Organic Chemistry and courses in German or French sufficient to give a reading knowledge of the language.

Laboratory Unit of Credit.—In those courses in which definite laboratory time is not fixed, three hours of laboratory work per week through one semester are taken as the equivalent of one unit of credit.

The Teacher's Recommendation.—Students who wish the Department recommendation for High School teaching in Physiology are expected to complete the first two years' work (courses 1, 2, 3, and 9).

Laboratory Fees.—Five dollars per semester for each laboratory course.

Graduate Courses

The graduate work of the Department is included in the courses numbered 7, 8, 10, 11, 12, 13, 14, and 15. Undergraduate students may elect such of these courses as they are prepared to take, but credit recorded in undergraduate standing will not count toward a higher degree. The details of the work of a graduate student will be planned for each individual, and will naturally depend on the aim sought by him and upon his previous training. Candidates for the higher degrees will be expected to include in their work attendance on the Journal Club and Seminary, the selection of certain of the courses given above, and the accomplishment of some research. When it is desired to select a minor subject, the choice of such minor will be guided by the needs of

the candidate. The work leading to these degrees is of such a nature as to require a reading knowledge of German and French for its accomplishment.

Preparation for the Study of Medicine

Students intending to enter on the study of Medicine are advised to take Physiology and Histology as a major subject, with Chemistry, Physics, and Anatomy among the collateral subjects. Such a curriculum gives that foundation both in scientific knowledge and in skill in experimental Physiology, and in Histological and Anatomical technique, which will make it possible to accomplish the medical course of the best medical schools with the greatest advantage. The courses required for graduation in the Department of Physiology and Histology with the degree of A. B. include the premedical requirements and the work of the first year of the Medical Department of this University. For details of requirements for students intending to register in the Department of Medicine see the announcement of that department.

PHYSICAL TRAINING AND PERSONAL HYGIENE

ENCINA GYMNASIUM

Royce Reed Long, Assistant Professor, and Director of Physical Training.

Harry Wilfred Maloney, Instructor.

James Porter Crawford, Kenneth Llewellyn Dole, Charles Merrill Fulkerson, Frank Howard Hilton, George Stevenson Holeman, Ernesto Ray Knollin, Clyde T. Wetmore, Gymnasium Assistants.

1. **Physical Training and Personal Hygiene.**—Three exercise hours per week in the gymnasium or its outdoor athletic sections. Registration may be repeated, but each student must make progress toward his highest physical efficiency. Short lectures on the hygiene of the individual will be given during part of the gymnasium hour. A regulation gymnasium uniform is required.

1 unit, each semester (Long, Maloney, and Assistants)

2. **Physical Training Methods.**—Open to students who desire to prepare as supervisors of physical training work in the public

schools or on public playgrounds. The work outlined below is planned to cover three years of time. In addition to this students should acquire a foundation in physiology, hygiene, education, sociology, and anatomy in those departments.

(*a*) Technique of gymnastics, athletic sports, gymnasium and playground games.

(*b*) Personal hygiene and first aid.

(*c*) Physical examinations and prescription of exercise.

(*d*) Gymnasium and playground equipment and supervision.

(*e*) A survey of the literature on physical training.

(*f*) Practice teaching.

Three or six hours per week.

1 or 2 units, each semester (Long)

ROBLE GYMNASIUM

Clelia Duel Mosher, Assistant Professor and Director.
Harry Wilfred Maloney, Instructor in Fencing.
Maude Cleveland, Edna Grace Davis, Maude L'anphere Crook, Assistants.

The aims of Roble Gymnasium, which is the laboratory of personal hygiene, are (1) to improve the standard of physical health of the women and to increase their mental and physical efficiency; (2) to give some of the preliminary work to students who are preparing to teach physical training and direct playground work.

1. Physical Training.—Three hours per week in the gymnasium or its open air divisions. Open to all women students. Registration may be repeated each semester, but each student must show steady progress toward her highest physical efficiency. The Stanford regulation gymnasium suit is required. All work is under the close supervision of the Medical Director.

First Year.—Gymnastics, Folk and Gymnastic Dancing.

Second, Third, and Fourth Years.—Gymnastics, Folk and Gymnastic Dancing, Sports or Fencing. 1 unit, each semester

(Mosher, Maloney, Cleveland, Davis, Crook)

2. Personal Hygiene.—Two lectures per week. Open to all women students. Required of all women taking Physical Training Methods. 1 unit, 2d semester (Mosher)

3. Physical Training Methods.—

a. Theory. 2 units, 1st semester

b. Practice Teaching.—2 hours per week, with preparation.
1 unit, 1st semester

c. Play Ground Administration and Equipment.—Lecture or recitation, with reference readings and papers. 1 hour, either semester

d. Supervision of Children's play.—4 hours per week.
2 units, either semester
(Mosher, Cleveland, Davis, Crook)

Students preparing to teach Physical Training or to supervise playground work should take in addition to the courses offered in this department:—

In the Department of Physiology:

1. General Anatomy and Physiology. 3 units, both semesters
2. Physiology of Muscle, Blood, and Circulation.
3 units, 1st semester
3. Physiology of Digestion, Respiration, Elimination of Wastes, Metabolism and Nutrition. 3 units, 2d semester

In the Department of Human Anatomy:

1. Osteology. 2 or 3 units, 1st semester

2, 3, 4. Dissections of (2) Head, Neck, Thorax, (3) the Upper extremity, (4) Lower Extremity and Abdomen.
2 to 5 units or more

7. Topographical Anatomy.

In the Department of English:

1*a*. Vocal Expression. 1 unit, either semester

ZOOLOGY

Charles Henry Gilbert, Harold Heath, George Clinton Price, Professors.
John Otterbein Snyder, Associate Professor.
Edwin Chapin Starks, Walter Kenrick Fisher, Assistant Professors.

1. Elementary Zoology.—A laboratory course involving the study of representatives of the principal groups of animals, accompanied by lectures on their structure and classification, and on the general laws of biology which they illustrate.
3 units, both semesters (Price)

2. Elementary Zoology (special).—A laboratory course for beginners designed to meet the needs of major students in Geology. A considerable number of forms in each of the principal groups will be studied, and attention will be given to the conditions under which animals live. Field trips will constitute a required part of the course.

2 units, both semesters (FISHER)

3. The Invertebrates.—This course, following the first year's work, is designed to give the student a broader knowledge of the morphology and relationships of the more important invertebrate groups. 3 units, both semesters (HEATH)

4. Invertebrate Embryology.—A study of segmentation, the formation of the germ layers, and certain phases of the later development, including the significance of larval forms and the relationships of the principal phyla. Must be preceded by courses 1 and 2.

2 units, both semesters (beginning 2d semester) (HEATH)

5. Advanced Work on Invertebrates.—The original investigation of problems connected with the anatomy and embryology of invertebrates. 3 to 5 units, both semesters (HEATH)

6. Microscopical Anatomy.—A study of the fundamental animal tissues, with drill in microscopical technique.

2 units, 1st semester (HEATH)

7. Classification of the Invertebrates.—A course designed to give a wider acquaintance with the larger groups of marine invertebrates. Must be preceded by either course 1 or 2.

3 units, both semesters (FISHER)

8. Special Systematic Work on Invertebrates.—Original investigation of problems connected with the classification of invertebrates.

2 or 3 units, both semesters (FISHER)

9. The Vertebrates.—A general course in the classification of vertebrate animals, with studies in their habits and the geographical distribution of species. The course will include field excursions and a study of the methods of collecting and preserving specimens. The course may be begun either semester.

2 units, both semesters (SNYDER)

10. Comparative Anatomy of the Vertebrates.—A more detailed examination of vertebrate morphology, including dissection of representatives of the several classes of vertebrates, with comparative studies in vertebrate osteology, the nervous and circulatory systems, etc.

3 units, both semesters (SNYDER)

11. Vertebrate Embryology.—First semester: development of the chick through the first three days of incubation. Second semester: the early stages in the development of the salamander and the later stages in the development of the mammal.

2 units, both semesters (PRICE)

12. Ichthyology.—A course of lectures and laboratory work, including an examination of the larger groups of fishes with special reference to the characters on which they are based, and including practical work in the discrimination of species.

2 units, both semesters (GILBERT, STARKS)

13. Advanced Ichthyology.—Special problems in the morphology and classification of fishes will be set for advanced students prepared for such work. 2 to 5 units, both semesters (GILBERT)

14. Journal Club.—Open to seniors and graduate students.

2 units, both semesters (GILBERT)

Major students must before graduation complete courses 1, 3, 6, 10, 12, 14, the first semester of courses 4 and 11, one advanced course in Zoology, and course 1 in Botany.

Work for graduate and special students will be laid out in accordance with their individual needs and preferences.

The Teacher's Recommendation.—The Department recommendation for High School teaching in Zoology requires the completion of the following subjects: Elementary Zoology, 6 units; the Invertebrates, 6 units; the Vertebrates, 4 units; Comparative Anatomy of the Vertebrates, 6 units.

THE ZOOLOGICAL COLLECTIONS

The ZOOLOGICAL MUSEUM contains a very full representation of the fishes of North America, and includes among others a valuable series of the deep-water fishes of the Pacific, and large collections from the West Indies, the Hawaiian Islands, Bering Sea, Japan, the coasts of Mexico and Central America, and the Galapagos Islands. The museum contains also a large representation of the reptiles, batrachians, birds, and mammals of California and adjoining States. The collection of marine invertebrates is rich in Pacific echinoderms and crustacea, and contains a good working nucleus in the other principal groups. The series of deep-sea forms is especially valuable.

Laboratory Fees.—All laboratory courses, three dollars each per semester.

ENTOMOLOGY AND BIONOMICS

†Vernon Lyman Kellogg, Professor.
Mary Isabel McCracken, Rennie Wilbur Doane, Assistant Professors.
David Starr Jordan, Lecturer.

ENTOMOLOGY

1. Elementary Entomology.—The elementary study of insect structure, development, and classification, including practice in collecting and preserving specimens. A preparatory study of the subject of entomology. 3 units, either semester (McCracken)

1a. Morphology and Physiology of Insects.—A study of the metamorphosis, comparative morphology, and special physiology of insects, with a comprehensive study of the honey-bee.
3 units, either semester (McCracken)

2. Natural History and Classification of Insects.—A comprehensive study of the natural history and classification of insects, and the literature of entomology (field and laboratory work).
4 units, either semester (McCracken)

3. Economic Entomology: Forest Insects.—A study of the insect enemies of forest and shade trees. The course includes field, laboratory, and bibliographic work. Must be preceded by courses 1 and 1*a*, or 2. 2 or 3 units, 1st semester (Doane)

3a. Economic Entomology: Orchard and Garden Insects.—A study of the principal injurious and beneficial insects of the orchard and garden. Includes field, laboratory, and bibliographic work, and a weekly lecture on the history, principles, and practice of economic entomology. Must be preceded by courses 1 and 1*a*, or 2.
2 or 3 units, 2d semester (Doane)

4. Economic Entomology: Coccidae (the Scale Insects).—A study of the classification, general biology, and economic relations of the scale insects, with particular attention to the more important injurious ones of the Pacific Coast. Field, laboratory, and bibliographic work, with occasional lectures. Must be preceded by courses 1 and 1*a*.
2 or 3 units, either semester (Doane)

---

†Absent on leave, second semester, 1911-12.

5. **Insects and Disease.**—A course on the relations of insects to the dissemination of disease in man and the domestic animals. One lecture and one or two laboratory periods a week. Open to students of some previous training in biology.

1 or 2 units, 1st semester (DOANE)

6. **General Entomology and Insect Adaptations.**—A course of lectures and demonstrations. Open to students who have had some work in Biology (Zoology, Botany, or Physiology). [Not given in 1911-12.] 2 units, 2d semester (KELLOGG)

7. **Advanced Work.**—Advanced study and investigation of the biology of insects. Laboratory and field work.

2 to 5 units, both semesters (KELLOGG)

Work for graduate and special students will be specially arranged.

Major students in Entomology must obtain before graduation twenty-four units of credit in Entomology, and credit for course 1 in Zoology, and course 1 in Botany, making thirty-six units in biological subjects.

The ENTOMOLOGICAL COLLECTIONS contain authoritatively determined specimens, accessible for comparison, in all of the insect orders, and include many sets of specimens illustrating the development and habits of insects. There is included, also, the most important existing collection of North American Mallophaga, comprising the types of four-fifths of all the species so far described from North America and the Pacific Islands, an unusually large collection of Coccidæ (scale insects), and a valuable series of specimens from the Galapagos Islands.

BIONOMICS

8. **Organic Evolution.**—Lectures on the laws or principles of biology and the factors in organic evolution. Not open to first- and second-year students.

2 units, 2d semester (JORDAN, KELLOGG, MCCRACKEN)

Laboratory Fees.—Three dollars per semester for each laboratory course.

GEOLOGY AND MINING

GEOLOGY

JOHN CASPER BRANNER, JAMES PERRIN SMITH, Professors.
AUSTIN FLINT ROGERS, NOAH FIELDS DRAKE, Associate Professors.
†ELWIN JAMES BOUNDEY, Assistant in Mineralogy.
†CARL HUGH BEAL, Curator in Geology.

Students intending to make Geology their major subject should offer, as a part to their entrance preparation, solid geometry, trigonometry, physics, chemistry, zoology, and French or German, or both; otherwise the mathematics, physics, chemistry, and language must be taken in the University.

1. **Dynamic and Structural Geology.**—Lectures, with syllabus.
3 units, 1st semester (BRANNER)

1a. **Physiography.**—Lectures, with syllabus.
1 unit, 2d semester (BRANNER)

2. **Economic Geology.**—Lectures, with syllabus. Open to students who have completed course 1.
2 units, 2d semester (BRANNER, DRAKE)

3. **Topographic Geology.**—Field and laboratory work, with the construction of geologic maps and sections. Open to students who have completed course 1 in Geology, and course 4*a* in Civil Engineering.
4 units, summer vacation (BRANNER, DRAKE)

4. **Field Geology.**—Field practice in working out geology in the field and its representation upon topographic maps and sections. Prerequisites: Geology 1, 5, and Civil Engineering 4*a*.
5 units, summer vacation (BRANNER, DRAKE)

5. **Mineralogy.**—(*a*) Methods of study and the determination of minerals, including Crystallography and Blowpipe Analysis (first semester); (*b*) Study of common and important minerals (second semester). Open to students who have taken or are taking qualitative analysis. 3 units, both semesters (ROGERS, BOUNDEY)

6. **Petrography.**—(*a*) Crystal optics and study of rock-forming minerals in thin sections and hand specimens (first semester); (*b*) Study of principal rock types, igneous, sedimentary, and metamorphic (second semester). Open to students who have completed course 5 or equivalent. 2 units, both semesters (ROGERS)

†Second Semester.

7. **Paleontology.**—(*a*) Systematic Paleontology, or the history and character of organisms (first semester); (*b*) Historical Geology, or the history and character of geologic formations (second semester). Open to students who have completed course 1.

4 units, both semesters (SMITH)

8. **Paleontology.**—Original investigation of various problems in paleontology, especially of invertebrate morphology, and of the distribution of faunas. This course will consist entirely of private work, in field and laboratory. Open to advanced students and graduates.

2 to 5 units, both semesters (SMITH)

9. **Advanced Mineralogy.**—Properly qualified advanced and graduate students may take up one or more of the following lines of study:

a. Crystal Morphology. Includes crystal measurement, calculation, and drawing. 2 or 3 units, 1st semester (ROGERS)

b. Crystal Optics. The transmission of light in crystals from both a theoretical and practical standpoint.

2 or 3 units, 2d semester (ROGERS)

c. Petrology of Igneous Rocks. A study of the broader geological and chemical features of igneous rocks, following Harker's "Natural History of Igneous Rocks." 2 units, 2d semester (ROGERS)

d. Paragenesis of Minerals. The occurrence, association, and origin of minerals. 2 units, 1st semester (ROGERS)

e. Chemical Mineralogy. Mineral or rock analysis, including preparation of material and study of some physical properties.

2 to 4 units, either semester (ROGERS)

10. **Paleontology.**—Lectures on special topics. Open to advanced students and graduates.

2 units, both semesters (SMITH)

11. **Special Courses.**—Special courses of instruction and training are laid out for advanced and special students according to the needs and qualifications of each individual. Special investigations are taken up by advanced students as rapidly as it is possible for them to undertake such work advantageously.

1 to 5 units, both semesters (BRANNER, DRAKE)

Fees.—Course 1, $3; course 2, $3; course 3, $15; course 4, $20; course 5, $5 each semester.

MINING AND METALLURGY

David Morrill Folsom, Galen Howell Clevenger, Associate Professors.
Hayes Wilson Young, Instructor.
Eugene Crittenden Templeton, Acting Instructor.

Students intending to make Mining and Metallurgy their major subject should offer as a part of their entrance preparation, solid geometry, trigonometry, advanced algebra, physics, chemistry, zoology, and Spanish, French, or German; otherwise the mathematics, physics, chemistry, and one language must be taken in the University.

Curriculum

The Department offers to students a five-year curriculum leading to the degree of Mining Engineer or Metallurgical Engineer.

The degree of Bachelor of Arts will be granted upon the satisfactory completion of four years of this curriculum.

Mining

The following is a general summary of the curriculum in Mining, which will be subject to adjustment in individual cases:

First Year—Applied Mathematics 1 (10 units); Engineering 1*a*, 1*b* (6 units); Chemistry 1, *a* (6 units); English A, 2 (3 units); Language—French, German, or Spanish (6 units). Total, 31 units.

[None of the first-year subjects offered in the second semester can be taken without the first semester's work. First-year students can therefore advantageously enter the course as outlined above only at the beginning of the first semester.]

Second Year:—Applied Mathematics 2, 3 (16 units); Mechanical Engineering 11 (2 units); Chemistry 6, *b*, *d* (8 units); Geology 5 (6 units); English 2*b* (2 units). Total, 34 units.

Third Year—Engineering 2, 3*a* (8 units); Civil Engineering 4*a* (5 units); Chemistry *h* (3 units); Mechanical Engineering, 1*a*, 1*b* (3 units); Geology 1, 2, 6 (9 units); Mining 8 (4 units). Total, 32 units.

Fourth Year—Mechanical Engineering 24, 31 (6 units); Law A (3 units); Geology 3, 4, 7*b* (13 units); Mining 1, 2, 4, 9, 10, *a* (16 units); Electrical Engineering 1 (4 units).

Geology 3 and 4 (9 units) are given during the summer vacation, between the third and fourth years.

Total of fourth year, 42 units.

In the fourth year Mining *b* (3 units), or Civil Engineering 8*c* (3 units) may be substituted for Mechanical Engineering 24.

FIFTH YEAR—For the degree of Mining Engineer the following course is suggested: Mechanical Engineering 35, 36 (6 units); Geology 9*c*, 9*d* (4 units); Mining 3, 5, 6, 7, *b* (21 units); Law 17 (2 units). Total, 33 units.

COURSES IN MINING

1. **General Lectures on Mining.**—Including methods of earth and rock excavation, prospecting, tunneling, shaft sinking, and mining methods. 5 units, 1st semester (FOLSOM, TEMPLETON)

2. **Ore Dressing.**—Lectures on crushing and concentrating machinery and methods.
2 units, 2d semester (CLEVENGER, FOLSOM)

3. **Summer Mining.**—Two months' systematic work in the mines. Between fourth and fifth years. 4 units

4. **Lectures on Mine Plant.**—Including hoisting machinery, compressors, mine pumps, ventilating fans, and the handling of ore underground and on the surface.
3 units, 2d semester (FOLSOM)

*5. **Ore Dressing.**—Continuation of course 2. Theories of concentration and comparison of milling practice in different parts of the United States. 2 units, 1st semester (FOLSOM)

*6. **Mine Engineering.**—Lectures and assigned reading on general engineering problems in connection with mining operations, including administration, organization, mine examinations, accounting, surveying, etc. 2 units, 2d semester (FOLSOM)

7. **Mine Thesis.**—Each student describes and estimates the cost of the development and equipment of an hypothetical mining property under conditions which are assigned so as to fit the experience he has gained in his summer work.
5 units, both semesters (FOLSOM, TEMPLETON)

*For fifth-year students only.

Metallurgy

Students working for the degree of Metallurgical Engineer will be required to take the same work for the first three years as the Mining Engineers.

In the fourth and fifth years the following courses must be substituted for engineering courses: Chemistry 2, 8, *e* (16 units).

A thesis on a metallurgical subject and advanced laboratory work will also be required in the fifth year.

The following four-year curriculum is offered for the degree of Bachelor of Arts:

First Year—Applied Mathematics 1 (10 units); Engineering 1*a*, 1*b* (2 units); Mechanical Engineering 11 (3 units); Chemistry 1, *a* (6 units); English A, 2 (3 units); Language -French, German or Spanish (6 units). Total, 30 units.

Second Year—Chemistry 2, 6, *b*, *d* (14 units); Geology 5 (6 units); Civil Engineering 4*a* (5 units); English 2 (2 units); Optional (3 units). Total, 30 units.

Third Year—Chemistry *c*, *h* (7 units); Geology 1, 2, 6 (9 units); Mining 2 (2 units); Mechanical Engineering 1*a*, 1*b*, 24, 31 (9 units); Optional (3 units). Total, 30 units.

Fourth Year—Law A (3 units); Electrical Engineering 1(4 units); Mining 1, 8, 9, 10, *a*, *b*, *d* (21 units). A short thesis will also be required for graduation, making a total for the year of 30 units.

Courses in Metallurgy

(Not open to first-year students.)

IGNEOUS METALLURGY

8. General Metallurgy.—Lectures upon the principles of metallurgy, fundamental chemical reactions, fuel, heat, refractory materials, etc. *Metallurgy of Copper and Lead.*—Lectures upon processes of lead and copper smelting, electrolytic copper refining, refining of base bullion, parting and electrolytic refining of Doré bullion. This course also deals with the metallurgy of gold and silver in so far as their metallurgy is inseparable from that of copper and lead. Open to students who have completed Chemistry 1, and prerequisite of all laboratory courses in Metallurgy.

4 units, 2d semester (Clevenger, Young)

9. Metallurgy of Constructive Materials.—Lectures upon the manufacture and properties of iron and steel, and to a less extent the other alloys used in engineering. Bearing metals, bronzes, brasses. etc. Laboratory work in this course is given in connection with Engineering 2*b* (Mechanics of Materials). Open to students who have completed Chemistry 1.

2 units, 1st semester (CLEVENGER)

HYDRO METALLURGY

10. Metallurgy of Gold and Silver.—Lectures upon the Cyanide process of gold and silver extraction. The older and now almost obsolete processes of chlorination, hyposulphite lixiviation, patio, and pan amalgamation, etc., are dealt with very briefly. Open to students who have completed Chemistry 1 and *a*, and prerequisite of laboratory course *b*. 2 units, 1st semester (CLEVENGER)

LABORATORY COURSES

a. General Metallurgy Laboratory.—A course of carefully selected experiments which illustrate the lectures in Metallurgy 8. Open to students who have completed Chemistry *h*, and course 8; in special cases may be taken at the same time as Metallurgy 8.

2 units, 2d semester (YOUNG)

b. Metallurgy of Gold and Silver Laboratory.—This course involves the laboratory examination and report upon the possible treatment of gold and silver ore by the cyanide process. Open to students who have completed Chemistry *d* and *h*, and Metallurgy 10.

3 to 5 units, either semester (YOUNG)

3. Metallography.—Conferences, reading, and laboratory work. Metallography by Ruer-Mathewson is used as a text. Frequent reference is made to the Metallographist and other standard works. Includes the study of micro-structure and cooling curves. Open to students who have completed Chemistry 10 and *i*, Mineralogy 5*a* and 5*b*, Petrography 6*a* and 6*b*.

3 to 5 units, either semester (CLEVENGER)

d. Metallurgical Research.—Properly qualified students may take up any subject of metallurgical investigation in laboratory, and under proper restrictions, certain investigations may be carried on in the field, also work in bibliography.

Any number of units, either semester (CLEVENGER)

Fees.—Courses 1 and 8, $5 each; courses 2, 9, and 10, $5 each; courses *a* and *b*, $10 per unit each; course *c*, $5 per unit; course *d*, according to amount of work done.

ENGINEERING

A. Entrance Subjects

Students must present among their entrance subjects solid geometry and trigonometry, in order to take the first year's work in applied mathematics for engineers. Those who fail to do this will not be able to graduate in less than five years.

B. General Courses

I. APPLIED MATHEMATICS

First-year Courses:—Algebra; Trigonometry; Co-ordinate Geometry.

Second-year Courses:—Calculus; Theoretical Mechanics. (See announcement of Department of Applied Mathematics, p. 127.)

II. GENERAL TECHNICAL COURSES

1a. Linear Drawing and Lettering.—(Drafting two afternoons a week, first half of the semester.) Open to all students, and required of those whose major subject is in any of the engineering departments, whether or not they have received entrance credit in mechanical drawing. This requirement is waived, however, for a student who satisfies the instructor that he has had the equivalent of this course, by submitting work in linear drawing and freehand lettering, or by passing a special examination. The instruments and materials for this course cost from twenty to thirty dollars.

1 unit, either semester (Foss)

1b. Descriptive Geometry.—Including applications to shades, shadows, and perspective. (Two afternoons of drafting each week, November and December. Two lectures and two afternoons of drafting each week, January to May.) This course is open to students who have completed or who are taking Solid Geometry and Engineering 1*a*.

and is required of students whose major subject is in any of the engineering departments.

1 unit, 1st semester; 4 units, 2d semester (Foss)

2. Applied Mechanics:—

a. Mechanics of Materials.—A study of the theory of the strength and elastic properties of the ordinary materials of engineering construction. The main subjects covered are simple tension, compression, and shear; theory of flexure, with application to simple, continuous, and non-homogeneous beams; theory of long columns; torsion; repeated stress; sudden stress and resilience. (Lectures and recitations three hours a week.)

b. Testing of Materials.—Each student is required to make a series of experiments, testing the strength and elastic properties of wrought iron, cast iron, steel, and wood. A careful record of all experiments is required of every student. (Laboratory work, six hours a week.)

Open to students who have completed the first- and second-year courses for Engineering students in Applied Mathematics; required of all students having Engineering as a major subject.

5 units, 1st semester (Wing, Moser)

3. Hydraulics:—

a. Hydrostatics and Hydraulics.—This course treats of fluid pressure, the principles of fluid equilibrium, and the laws governing the flow of water through orifices, over weirs, in closed conduits, and in open channels. Open to students who have completed courses 2 and 3 in Applied Mathematics. 3 units, 2d semester (Hoskins)

b. Hydraulic Motors.—A discussion of the theory of the main types of turbines, including centrifugal pumps. A few lectures on the general theory of energy and on relative motion are given as an introduction to the course. Open to students who have completed course 3*a*.

3 units, 1st semester (Hoskins)

I. CIVIL ENGINEERING

Charles David Marx, Charles Benjamin Wing, Leander Miller Hoskins, John Charles Lounsbury Fish, Professors.
John Harrison Foss, Assistant Professor.
Charles Moser, Instructor.

A. Topographic Engineering

4a. Elementary Surveying.—Lectures: systems of co-ordinates, measurements, choice of systems, errors, checks, surveys. Field work: experimental exercises, surveys. Drafting-room: computing, mapping. (Lectures two hours, field work and drafting nine hours, each week.) Open to students who have completed Engineering 1*a* and Applied Mathematics 1. Required of students in Civil and Mining Engineering.
5 units, either semester (Fish)

4b. Elementary Surveying.—For students in Mechanical and Electrical Engineering. (Field work, reading, and drafting, six hours each week.) 2 units, 1st semester (Fish)

B. Railroad Engineering

6a. Railroad Surveying.—Lectures: circular curves, spirals and turnouts; reconnaissance, preliminary, location, and construction surveys; earthwork. Field and office: exercises in laying out curves and taking cross-sections for topography and earthwork, and in plotting them; preliminary survey with profile and topographic map; paper location with profile and quantities; staking out paper location; earthwork and drainage surveys; final location profile and map; earthwork computations; distribution of material with use of mass diagram; overhaul computation; estimate of cost. (Recitations two hours, drafting and field work nine hours, each week.) Open to students who have completed 4*a*. Required of students in Civil Engineering.
5 units, 2d semester (Fish)

6b. Railroad Location.—Interest problems, sinking fund, present value of cost of maintenance and of renewal, capitalization, comparison of structures on basis of cost. Locomotive tractive force and resistances thereto, velocity profile, momentum grade. Traction problems involving inter-relation of train weight, grade, speed, and characteristics of locomotive. Value of change in distance, curvature, rise and fall, and ruling grade, based on analysis of operating expenses.

Pusher grades, balance grades for unequal traffic and for adjacent divisions. Open to students who have completed 6*a*.

2 units, 1st semester (Fish)

6c. Railroad Construction.—Nature and requirements, methods of construction, organization of engineer corps; collection and record of information upon which to base designs and plans; designs; plans; staking out the work; inspection; classification, monthly estimates; records, reports and accounts; checks and controls. (Individual work on assigned problems three, six, or nine hours each week; lectures given during the drafting periods.) Open to students who have completed 6*a* and who have taken or are taking 8*b*.

1, 2, or 3 units, 2d semester (Fish)

C. Structural Engineering

8a. Elements of Design:—

1. *Materials.*—[See course 10 in Mining and Metallurgy.]

2. *Mechanics of Structures.*—Course 3 in Applied Mathematics is extended to the analytical and graphical determination of stresses in simple trusses. (Drafting-room, nine hours a week first half of semester.)

3. *Theory of Structural Details.*—Section 2 above is extended to an investigation of the distribution of stresses in structural details. (Drafting nine hours a week, last half of semester.)

Open to students who have completed course 1 in Engineering, and who have taken or are taking course 2 in Engineering, and also course 11*c* in Geology and Mining. Required of all students having Civil Engineering as a major subject. 3 units, 1st semester (Foss)

8b. Elements of Design:—

1. *Materials.*—Structural materials, other than metals, are studied from an engineering standpoint. Wood, stone, brick, limes, cement, etc., are considered in order. (Lectures three hours a week first half of semester.) (Wing)

2. *Foundations.*—Under this head are considered the bearing power of soils, strength of piles, distribution of pressures, and similar details connected with the design of simple foundations. (Lectures and assigned reading three hours a week last half of semester.)

(Wing)

3. *Design.*—Complete designs are made, including working drawings, bill of materials, and estimate of cost, of some simple structure, such as

a mill building or highway structure. (Drafting-room, nine hours a week first half of semester; six hours a week last half of semester.) (MOSER)

4. *Testing.*—Extending the work of course 2*b*. Each student is required to make a series of experiments, testing the physical properties of cement and other masonry materials. (Laboratory, last half of semester.) (MOSER)

Open to students who have completed course 8*a* in Civil Engineering; required of all students having Civil Engineering as a major subject. 5 units, 2d semester (WING, MOSER)

8c. Elements of Design.—Courses 8*a* and 8*b* abridged to meet the requirements of students having Mining, Mechanical, or Electrical Engineering as a major subject. Special applications are made to hoisting and conveying structures, mill buildings, and central station buildings.

Open to students who have completed courses 1 and 2 in Engineering and course 10 in Mining and Metallurgy.

2 or 3 units, 2d semester (WING)

9. Railway Bridges.—This course comprises the determination of the stresses in modern types of railroad bridges, including cantilever and swing spans, masonry arches, and arch ribs; the discussion of the most economical types, spans, and dimensions of bridges and bridge members; the study of the methods of constructing sub-aqueous foundations, shop methods, erection, inspection of material, specifications, and other factors influencing the design of bridges. Designs are made by each student to fulfill actual conditions, the parts proportioned, and bills of material prepared. Open to students who have completed course 8. (Lectures two hours per week, drafting nine hours.)

5 units, both semesters (WING)

D. HYDRAULIC ENGINEERING

12. Water-Supply Engineering for Towns and Districts.—Sources of supply. Collecting and storing of water, either for water supply of towns or for irrigation purposes. Settling, filtering, conducting, and delivering of water, including the study and design of all accessory works. (Three hours lectures and recitations, six hours drafting.) Open to students who have completed courses 2 and 3 in Engineering and 4*a* and 8*a* in Civil Engineering; required of all students who take their major in Hydraulic Engineering.

5 units, 1st semester (MARX)

13. Sanitary Engineering.—Including sewerage of towns and drainage of lands. Special attention will be given to the study of all municipal sanitary problems, such as removal of sewage, destruction of garbage, construction, maintenance, sweeping, and repairs of streets and pavements. (Three hours lectures and recitations, six hours drafting.) Open to students who have completed courses 2 and 3 in Engineering and 4*a*, 8*a*, and 12 in Civil Engineering; required of all students who take their major in Hydraulic Engineering.

5 units, 2d semester (Marx)

15. Construction of Canals, River and Harbor Improvements.—Lectures and designing as per arrangement. Open to students who have completed courses 2*a*, 2*b*, and 3 in Engineering and 4*a* and 8*a* in Civil Engineering. 2 units, both semesters (Marx)

16. Technical Seminary.—Study of German and French technical journals. Open only to fourth-year students in Civil Engineering.

2 units, both semesters (Marx)

II. MECHANICAL ENGINEERING

William Frederick Durand, Guido Hugo Marx, Professors.
William Rankine Eckart, Associate Professor.
Everrett Parker Lesley, Charles Norman Cross, Assistant Professors.
Lawrence Edminster Cutter, *Harry Harmon Blee, †Clarence P. Campbell, Edward John Stanley, James Bennett Liggett, Theron James Palmateer, Robert Henry Harcourt, Instructors.

For students entered subsequent to August, 1910, the following courses constitute a five years curriculum leading to the degree of Mechanical Engineer. Students successfully completing the first four years of this curriculum will be granted the degree of Bachelor of Arts

[Numbers following subjects indicate number of units credit for the year.]

First Year—Applied Mathematics (10); Freehand Drawing (2); Chemistry (9); Shop Work (6); French or German (6); Mechanical Engineering A (2).

*First Semester.
†Second Semester.

Second Year—Applied Mathematics (6); Mechanics (10); Linear Drawing and Descriptive Geometry (6); Physics (8); Shop Work (2).

Third Year—Applied Mechanics (5); Hydraulics (3); Machine Drawing (2 or 3); Elementary Machine Design (5); Technical English Composition (2); Surveying (2); Metallurgy (3); Physics (2); Electrical Engineering (2); Shop Work (3).

Fourth Year—Heat Engines (6); Machine Design (8); Experimental Engineering (6); Economics (3); Hydraulic Motors (1); Electrical Engineering (6); Shop Work (6).

Fifth Year—Thermodynamics (1); Advanced Design (3 plus 3 elective); Experimental Engineering (3); Business and Contract Law (3); Shop Administration (3); Power Plants (4); Pumping Machinery (2); Seminary (elective) (4); Thesis (8).

The above represents the requirement for the student entering regularly with minimum mathematics and no advanced credit. For such student, in addition to the above curriculum, there should be a maximum possible elective among other subjects in other departments of the University of nineteen units. For students who may bring advanced credit in drawing, shop work, chemistry, and other subjects, the amount of possible elective may be considerably increased.

A. General Survey of Engineering Industries.—Special lectures and assigned topics. Required of first-year students.

1 unit, each semester

1-8. Shop Work:—

1a. Forge Practice.—(2 exercises a week, half year.)

1b. Lecture in Forge Work.—

3a. Foundry Practice.—(2 exercises a week, half year.)

3b. Lecture in Foundry Work.—

5. Woodworking.—(2 exercises a week, half year.)

6a. Pattern Shop Practice.—(2 exercises a week, half year.)

6b. Lecture in Pattern Shop Work.—

7a. Elementary Machine Shop Practice.—(2 hours a week half year.)

7b. Lecture in Machine Shop Work.—

8. Advanced Machine Shop Practice.—(3 hours a week, half year.)

Courses 1-8 are open to all students, and required of students in Mechanical Engineering. 2 or 3 units, each semester

(Lesley, Stanley, Liggett, Palmateer, Harcourt)

9. Shop Administration.—A course of lectures on workshop organization and administration, factory accounting, wage systems,

selection of machinery, factory methods, etc. Prerequisites: courses 1 to 7 inclusive. 2 units, 2d semester (LESLEY)

11. Elementary Machine Drawing.—Practice in making free-hand sketches of machine parts from which working drawings, tracings, and blueprints are developed. (Six or nine hours a week in drafting-room.) Prerequisite: course 1*a* in Engineering.

2 or 3 units, either semester (CUTTER)

13. Elementary Machine Design:—

a. Function of machines; motion, force, and work in machines; valve gears. (Three hours a week lectures and recitations, second semester.)

b. Drafting course applying the principles treated in *a.* (Six hours a week drafting, second semester.)

Prerequisites: course 11 in Mechanical Engineering and course 1*b* in Engineering. Courses *a* and *b* must be taken together and are required of students in Mechanical Engineering.

5 units, 2d semester (G. H. MARX)

14. Machine Design.—Study of machine details, such as fastenings (including bolts and screws, riveted joints and boiler design, keys, fits and fitting); axles, shafts, and spindles; journals, boxes, and lubrication; ball and roller bearings; sliding surfaces; couplings and clutches; gear, belt, rope, and chain transmission systems; flywheels; springs; frames, and supports; etc. (Two hours a week recitation and lectures, six hours in the drafting-room, throughout the year.) Open to students who have completed course 13 in Mechanical Engineering, and who are taking course 2 in Engineering; required of students in Mechanical Engineering.

4 units, both semesters (G. H. MARX)

15. Machine Design.—An abridged treatment of the field covered in courses 13 and 14. (Three hours a week recitations and lectures, six hours a week in the drafting-room, first semester.) Open to students who have completed Engineering 1*b*, Mechanical Engineering 11, and are taking Engineering 2. Intended for Engineering students whose major subject is not Mechanical Engineering.

5 units, 1st semester (G. H. MARX)

16. Advanced Machine Design.—Design of complete machines. Students may elect machine tools, cranes, steam or gas engines, or special problems. (One lecture and six hours drafting per week.)

Intended for fourth-year students who have completed courses 14, 31, 33. 3 units, both semesters (G. H. Marx, Cutter)

21-25. Experimental Engineering.—

21. Calibration and Use of Engineering Apparatus and Instruments, including gages, thermometers, planimeters, indicators, dynamometers, meters, fuel calorimeters, and the testing of lubricating oils. (One lecture and six hours in the laboratory per week.) Required of third-year students in Mechanical Engineering.

3 units, 1st semester (Eckart, Cross, Blee)

22. Testing of Steam Engines and Boilers, including determination of engine clearance; valve setting; mechanical efficiency, steam calorimetry, economy and complete tests of simple and compound engines, steam turbines, gas engines; tests for speed regulation, and the testing of boilers. (One lecture and six hours in the laboratory per week.) Open to students who have completed courses 21 and 31. Required of fourth-year students in Mechanical Engineering.

3 units, 2d semester (Eckart, Cross, Campbell)

23. Testing of Pumping Machinery and Power Plant Auxiliaries, including steam and centrifugal pumps, hot-air pumping engines, injectors, heaters and economizers, blowers, condensers, refrigerating machinery, and a complete power-plant test. (One lecture and six hours laboratory per week.) Open to students who have completed courses 21 and 22. Required of fourth-year students in Mechanical Engineering.

3 units, 2d semester, 1911-12; 1st semester only, thereafter (Eckart, Cross, Campbell)

24. An Abridged Course in Experimental Engineering, intended for Civil Engineering, Geology and Mining, and Chemical Engineering students. Includes the calibration of apparatus, testing of steam and gas engines, steam turbines, boilers, pumps, and water wheels. (One lecture and six hours in the laboratory per week.) Open to students who have completed course 31.

3 units, 2d semester (Eckart, Cross, Campbell)

25. An Advanced Course in the Investigation of Engineering Problems. Open to all students who have completed courses 21, 22, and 23.

1 to 5 units, both semesters (Eckart, Cross)

31. **Heat Engines.**—Mechanical theory of heat and its applications. (Two lectures and three hours' office work per week.) Required of third-year students in Mechanical Engineering.
3 units, 1st semester (DURAND)

33. **Heat Engines.**—Continuation and application of course 31. (Two lectures and three hours' office work per week.) Required of third-year students in Mechanical Engineering. Lecture and office work as for 31. 3 units, 2d semester (DURAND)

34. **Thermodynamics.**—A course in theoretical thermodynamics, with special reference to heat engines, and intended to supplement course 6, which is a prerequisite. Required of fourth-year students in Mechanical Engineering. 1 unit, 2d semester (DURAND)

35. **The Mechanical Engineering of Central Power Stations.**—Lectures. Prerequisite: course 31.
2 units, 1st semester (DURAND)

36. **Pumping Machinery.**—A lecture course for fourth-year students. Prerequisite: course 31, first semester.
2 units, 2d semester (DURAND)

37. **Seminary.**—A weekly conference for the discussion of current engineering literature and of special topics. Open to fourth-year students only. 1 unit, both semesters (DURAND)

Laboratory Fees.—Courses 1*a*, 3*a*, 7*a*, four dollars per credit hour; courses 5, 6*a*, three dollars per credit hour; course 8, two dollars per credit hour; courses 21, 22, 23, 24, six dollars; course 25, two dollars per credit hour.

III. ELECTRICAL ENGINEERING

†HARRIS JOSEPH RYAN, Professor.
SAMUEL BARCLAY CHARTERS, JR., Assistant Professor.
JOHN ANDREW KOONTZ, EUGENE GARRISON MCCANN, AXEL NIELSEN, Instructors.

FOUR-YEAR COURSE

To complete this course in four years the student must present at entrance credits in Physics, Chemistry, and Applied Mathematics A and B.

†Absent on leave, 1911-12.

The following courses of instruction are given. Those required for the undergraduate degree with Electrical Engineering as a major subject are so specified; in addition the work required for this major includes the following courses in other departments:

Applied Mathematics A, B, 1, 2, 3; Engineering 1*a*, 1*b*, 2*a*, 2*b*, 3*a*; Civil Engineering 4*b*; Mechanical Engineering 1*a*, 1*b*, 3*a*, 3*b*, 5, 6*a*, 6*b* 7*a*, 7*b*, 11, 13*a*, 13*b*, 21, 22, 31, 33, 35; Physics 6*a*, 6*b*, 9, and photometry or Electrical Engineering 4 (one unit); Chemistry 1 and *a*; English, A.*

New students should apply to the Registrar for copies of the information circulars that give the various courses grouped by semesters and the corresponding laboratory, syllabus, and general fees so that they may know in advance of registration the costs to be encountered, both in time and money.†

Students entering with advanced credit may also elect such other work as time and preparation permit.

A, B. Survey of Electrical Industries.—Advisory instruction to acquaint the underclassman with his duties as an electrical engineering student. For first-year students, A; for second-year students, B.

1 unit, each semester (CHARTERS)

1. Elements of Electrical Engineering.—An abridged course in the industrial applications of electricity, intended for non-electrical engineering students. Two laboratory lectures, one recitation, and one three-hour laboratory period per week. Prerequisites; courses 1, 2, and 3, in Applied Mathematics, and entrance Physics.

4 units, either semester (CHARTERS, KOONTZ, MCCANN)

2. Electrical Energy.—Required of third-year students in Electrical Engineering. Class and laboratory instruction in the technology of magnetic, electric, and electrostatic phenomena, electrical machinery

*The Department insists that all Stanford requirements in English be made up at the earliest practicable date; that the student shall continue throughout his course to improve in the practice of good English. Those who fail to do this can not be graduated in four years; they will be required to pursue courses of study in the English department until their status in regard to English is satisfactory.

†Laboratory courses in chemistry and other subjects must be taken up as scheduled. These courses are prerequisite in character and cannot be deferred; the student must, therefore, be prepared to meet the corresponding laboratory fees when due.

and auxiliaries in continuous and alternating current working. Second semester prerequisites: Applied Mathematics A, B, 1, 2, 3; Engineering 1*a*, 1*b*, 2*a*, 2*b*; Mechanical Engineering 11, 13*a*, 13*b*; Physics 6*a*, 6*b*, 9; Electrical Engineering 2*a* (first semester).

a. Recitations and Experimental Demonstrations.—
1 unit, 1st semester; 4 units, 2d semester (CHARTERS, NIELSEN)

b. Laboratory Work.
4 units, 2d semester (KOONTZ, MCCANN, NIELSEN)

[Course 2 is supplemented by Physics 9, laboratory work in electrical measurements (4 units, 1st semester).]

3. **Electrical Engineering.**—Required of fourth-year students in Electrical Engineering. Lectures, laboratory, and class work, elements of design to be elected in a particular specialty. Prerequisites: Electrical Engineering, 2*a*, 2*b*; Engineering, 3*a*; Mechanical Engineering, 21, 31, 33, as follows:

a. Lectures:

a1. General Practice: (1) Standardization Authorized by the A. I. E. E. (2) Fire Hazard, National Electrical Code. (3) Transmission Economics. (4) Standard Machinery, Auxiliaries and Structural Supplies. (5) Municipal Distribution of Electricity for Miscellaneous Service. (6) Long distance transmission of power for general purposes. (7) Discussion of typical installations. (8) Elements of finance controlling the uses of electricity. (9) Survey of electrical industries. (10) Historical and biographical sketches; Proceedings of the American Institute of Electrical Engineers.
4 units, 1st semester; 2 units, 2d semester (CHARTERS)

a2. Electric Railways. 2 units, 2d semester (CHARTERS)

a3. Transmission of Intelligence.
2 units, 2d semester (CHARTERS)

b1. Laboratory Work.—Characteristic performance of standard machinery and auxiliary apparatus; tests of machinery and auxiliaries for capacity, acceptance, and technical data. By arrangement.
4 units, 1st semester (KOONTZ, MCCANN)

b2. Recitations, supplementing *b1.*
3 units, 1st semester (NIELSEN)

c. Applications.—Drill work, use of professional literature, and problems assigned in one of the following elective specialties:

c1. Elementary designs of power plants and systems of distribution; studies of corresponding practice as reported in literature and by visits to neighboring plants. (CHARTERS)

c2. Design studies in electric railway practice. (CHARTERS)

c3. Design studies in intelligence transmission.
4 units, 2d semester (CHARTERS)

Students in Electrical Engineering are not permitted to register for particular sections only in courses 2 and 3. The work in all sections of either course must be concurrent. A student who fails to do satisfactory work in these courses as a whole may be required to repeat all sections of a corresponding course, concurrently.

4. Elements of Illumination—Elective in substitution for physics—photometry. 1 unit, 2d semester (MCCANN)

10. Graduate Work.—

a. Advanced study and investigation as assigned to meet the needs of the individual.

b. Preparation of reports based upon results obtained in graduate work and their presentation to the Stanford Branch of the American Institute of Electrical Engineers.

c. Preparation of thesis required for the degree of Engineer in electrical engineering. (CHARTERS)

FIVE-YEAR COURSE

Those who have decided ability for analysis, technical study, and investigation can profit by an extra year in the University. Students of this class may extend their studies through five years by one of two plans, as follows:

1. By completing the regular four-year curriculum in electrical engineering, receiving the degree of Bachelor of Arts, and by applying an additional year to graduate work elected to meet the rquirements of the individual, the regulations of the University, and the approval of the major professor, receiving the degree of Engineer.

2. By the pursuit of a five-year curriculum that includes the regular four-year curriculum in electrical engineering and other studies so selected, correlated, and scheduled as to meet the needs of the particular individual and the approval of the major professor. At the completion of this course the University will grant the degree of Bachelor of Arts, and the department will certify the character of the work taken.

The Stanford Branch of the American Institute of Electrical Engineers is an organization authorized by the Institute and maintained by the members of the senior class for the discussion of the Proceedings of the Institute, and of other topics as assigned, and the review of current electrical literature.

Laboratory Fees.—Two dollars per unit of university credit.

Syllabus Fees.—Applicable to syllabus, lantern slides, and charts. One dollar per course-section.

MEDICINE

Ray Lyman Wilbur, Executive Head.
William Ophüls, Secretary of the Medical Faculty.

Buildings and Equipment

The buildings in San Francisco occupy four fifty-vara lots bounded by Clay, Sacramento, and Webster streets, and consist of the Clinical and Laboratory Building, and Lane Hall; Lane Hospital, a modern building in brick and stone, with a capacity of one hundred and eighty beds; and the Nurses' Home.

At Stanford University the buildings and laboratories of the University are used for instruction in Medicine.

Library Facilities

The Lane Medical Library, which is a part of the University library, was founded by the Directors of Cooper College, as provided by the will of Mrs. Levi Cooper Lane, and is housed in Lane Hall at present. At the beginning of the college year 1912-13, the new medical library building will doubtless be ready for use. It is being erected from funds left for the purpose by Dr. Levi Cooper Lane, and $20,000 from the Directors of the Cooper Medical College. The building, which will cost approximately $140,000, is a handsome fireproof structure of Colusa sandstone, three and a half stories high, with steel stacks accommodating 80,000 volumes, and is located opposite the medical buildings on the corner of Sacramento and Webster streets.

The Lane Medical Library is a collection of approximately 39,000 volumes. The most valuable historical portion was obtained from the New York Hospital, the oldest medical library in the country

About 300 periodicals are currently received, and the numerous files of bound journals are being completed as rapidly as possible.

The University library contains sets of serials relating to anatomy, biology, physiology, pharmacology, and chemistry of particular importance to medical students.

The Lane Medical Library, besides the Lane endowment funds, has recently received a number of gifts of books and money. Dr. Adolph Barkan, Professor Emeritus of Ophthalmology, has presented the sum of $10,000 to be used for the endowment of the "Adolph Barkan Library of Ophthalmology and the Allied Sciences." A room in the new building has been set aside for this valuable collection. The Alumni of Cooper Medical College are collecting a fund for the endowment of a special library of Obstetrics and Gynecology in honor of Dr. Henry Gibbons, Jr., formerly Professor of Obstetrics and Dean of Cooper Medical College.

In addition, the income of the Charles G. Lathrop fund of $5,000, the J. Henry Meyer, Antoine Borel, and Edward Coleman funds of $2,500 each, and the income from life memberships, are available for the purchase of books and periodicals and for the maintenance of the Library.

The full privileges of the Library can be obtained by all members of the medical profession and by others, through a life membership of one hundred dollars or a yearly membership of ten dollars; and the privilege of consulting the Library, but not of withdrawing books, for five dollars annually.

Clinical Opportunities

At the City and County Hospital in San Francisco the Medical Department controls one hundred beds, averaging about a thousand patients per year. The hospital facilities will be greatly improved with the erection of the new City and County Hospital, which the City of San Francisco is building at an expense of two million dollars. It is expected that the hospital will be completed in 1913.

Lane Hospital was designed as a teaching hospital. It has now a number of teaching beds, which it is planned to increase in the near future. The College Dispensary averages about nine thousand new patients a year.

Hospital Interneships

Eight internes are appointed annually at the Lane Hospital. Three of these are Senior Internes and have a continuous service for one

year with the option of renewal in any of the following divisions: Medicine, Surgery, or Obstetrics and Gynecology. Five Junior Internes, with an alternating service, are likewise appointed. Three of these are expected to become Senior Internes later. A Senior Externe is also appointed for the Eye, Ear, Nose, and Throat Department. In addition interneships are available at the City and County Hospital and at other hospitals in the City and the State.

The Lane Medical Lectures

The Lane Medical Lectures, founded in 1896 by Dr. Levi Cooper Lane, are given biennially on medical subjects, and students and the medical profession are cordially invited to attend. The course for 1911 was given by Dr. Ernest Fuchs, of the University of Vienna, on the subject "The Importance of Ophthalmology in its Relation to Systemic Diseases." The next course will be given in 1913.

Organization

The Department of Medicine is an integral part of the University, controlled by the Board of Trustees, the President, and the Academic Council in the same manner as are other departments of the University.

The teaching body of the Medical Department consists of: (a) The members of the Medical Department Faculty, which is composed of all Professors, Clinical Professors, Associate Professors, and Associate Clinical Professors giving instruction in the courses included in the Medical curriculum or in graduate courses in Medicine either at Stanford University, or in San Francisco; (b) Assistant Professors and Assistant Clinical Professors; (c) Lecturers, Instructors, Clinical Instructors, and Assistants.

"Professors" and "Associate Professors" are members of the Medical Faculty who are under full salary and who give the main part of their time to the work of instruction. "Clinical Professors" and "Associate Clinical Professors" are of equal rank with Professors and Associate Professors respectively, but are engaged in practice.

The functions of the Medical Faculty and of the Executive Head are defined under the organization of the Faculty of the University for Department Faculties and Executive Heads.

For purposes of administration the work of the Department is organized into Divisions as follows: Anatomy; Bacteriology; Physiology; Chemistry; Pharmacology; Pathology; Medicine, including Pediatrics, Neurology, Psychiatry, Electrotherapy, Dermatology and Syphilis,

Jurisprudence, Dietetics, and Tropical Medicine; Surgery, including Ophthalmology, Otology, Laryngology, Rhinology, Genito-Urinary Surgery, X-ray; Obstetrics and Gynecology; Hygiene and Public Health. The Executive of each Division, appointed annually by the President of the University, is the administrative officer of the Division, with duties, with respect to the Division, similar to those prescribed for Executive Heads of Departments.

The Division Faculties consist of all members of the teaching staff of the several Divisions, but only Professors, Clinical Professors, Associate Professors, and Associate Clinical Professors have the right to vote.

The Seven Years' Curriculum

The combined seven years' curriculum—three years of college work and four years in medicine—lead to the degrees of Bachelor of Arts and Doctor of Medicine.

Admission to the Department of Medicine

Three years of collegiate work in Stanford University (approximately ninety unit hours), or its equivalent as accepted by the Committee on Advanced Standing, is required for admission to the Department of Medicine. This preparatory training must include one year of Physics, Chemistry including Qualitative Analysis, and Physiology or Biology, with laboratory work in each, and such a reading knowledge of French or German as shall be acceptable to the Department of Medicine.

Candidates for admission to the Department of Medicine, or for advanced standing in the Department, are permitted to register with one condition, but the condition must be removed within one year to the satisfaction of the head of the Department or Division in which the condition was incurred.

The State Law governing the practice of Medicine in California prescribes that every person before practicing Medicine or Surgery must produce satisfactory testimonials of good moral character and a diploma issued by some legally chartered medical school, the requirements of which shall have been at the time of granting such diploma, in no particular less than those prescribed by the Association of American Medical Colleges for that year. At the present time the Association of American Medical Colleges requires that every medical student must be registered in a medical college or department for four years and that his preparatory course shall have included two years of Latin, or four

years of high-school German or French, or its equivalent, provided a satisfactory examination is passed in the elements of Latin grammar, two years of Mathematics, two years of English, one year of History, two years of laboratory science, and six years of further credits in languages, literature, history, or science.*

Students in any Department of the University who desire to enter upon the study of Medicine and who have included in their course of study the subjects required for admission to the Medical Department, may, at the beginning of their fourth or senior year in the University, enroll as students in medicine and continue as candidates for the degree of Bachelor of Arts.

Under the Major Department system a student, expecting to study Medicine, may select any Major Subject as candidate for the degree of A. B. and may use the electives outside his Major requirements to cover the requirements for admission to the Medical Department and also some of the studies listed in the first three semesters of the Medical curriculum. For the choice of such subjects and the time when they may be taken with advantage, the student is referred to the Departments of Physiology and Histology, and of Chemistry.

A student who is unable to complete the requirements of his Major department and the first year in Medicine by the end of his senior year, through delay in making a choice of Medicine, may nevertheless register in Medicine and be eligible for the degree of A. B. in the Department of Physiology and Histology at the end of the ninth semester—the third semester in Medicine.

Students who have included in their course of study the subjects required for admission to the Medical Department while retaining their registration in their Major Department as candidates for the degree of A. B., must also enroll in the Department of Medicine during the fourth year and pay the fees of the Department in order that this year may count as part of the fourth year's registration in Medicine as required by the law of the State and the regulations of the University.

The Major requirements of the Department of Physiology and Histology include the requirements for admission to the Department of Medicine and may also include the studies of the first year in Medicine.

In the Department of Chemistry, Curriculum C in Medical and Sanitary Chemistry includes the requirements for admission to the Department of Medicine.

*Candidates for licensure possessing a baccalaureate degree are not required to present certificates for Latin by the Board of Medical Examiners of the State of California at present.

Special Workers

Physicians and others who are properly qualified, but not candidates for a degree, may be admitted to work in the Department of Medicine with the permission of the Executive Head of the Department and of the Professor or Professors concerned. Such persons shall be listed as Special Workers.

The Curriculum in Medicine

The required period of study for the degree of Doctor of Medicine is four years (eight semesters). The work of the first three semesters is given at Stanford University and is devoted to anatomy, bacteriology, chemistry, embryology, histology, neurology, pharmacology, and physiology. The last five semesters are devoted mainly to work in the pathological and clinical laboratories and in the hospital wards and the dispensary in San Francisco.

Fees

The tuition fees of the Medical Department are $150 per annum, payable in installments of $75 each semester; $5 per semester for the first four semesters, covering charges for material; and such other deposits to cover breakage or loss of apparatus or materials as may be required in any department or division, these deposits being returnable, less charges for breakage, loss, or wear and tear of apparatus or materials used. The total deposits for this purpose may vary from $10 to $20 per annum.

Requirements for the Degree of Doctor of Medicine

The candidate for the degree of Doctor of Medicine must, according to the laws of the State, have attained the age of twenty-one years, and have attended a medical college of recognized standing for four years. He must further have fulfilled the entrance requirements of the Medical Department of Stanford University before enrolling as a medical student, have satisfactorily completed the required curriculum, passed all examinations, paid in full the required fees, and have spent the last of the four years in medicine at this University.

Regulations Concerning Theses

A Thesis based as much as feasible upon research work will be required of each student. If not done previously, four curriculum hours of the seventh and eighth semesters are to be devoted to its preparation under the supervision of one of the Divisions.

Students of Medicine may select the Division in which they desire to write their Thesis and if properly qualified may begin work on the same at any time before the beginning of the second semester of their fourth year in Medicine. The topic for investigation or the subject matter for study shall be chosen with the advice and consent of the Executive Head of the Division concerned, and no change of subject shall be made without the consent of the Executive under whose direction the work was begun.

Theses may be based wholly or partly upon:

(*a*) An original investigation or the re-investigation of published work.

(*b*) The construction of original models and preparations; the designing or construction of new appliances or apparatus or the description and application of new and improved technical methods.

(*c*) The compilation and analysis of a series of cases or observations.

(*d*) An historical investigation or a critical review of some subject.

The names of students and the subjects for Theses shall be reported to the Executive Head of the Department of Medicine by the Executive Heads of Divisions before December first of the students' fourth year in Medicine.

The Executive Head of the Division in which the Thesis work is done, and two members of the teaching staff to be appointed by the Executive Head of the Department of Medicine, shall constitute a committee to examine and pass upon Theses offered for graduation, but in no case shall a Thesis be accepted which has not been approved by the Executive Head of the Division concerned or which in his estimation represents less than one hundred and twenty hours of work.

If credit given for Theses is counted for the baccalaureate or other degrees it shall not be counted a second time nor shall the candidate be excused from Thesis work in Medicine.

Completed Theses must be typewritten upon standard paper and delivered to the supervising executive, not later than thirty days before the date of Commencement.

Any Thesis of special merit may, by vote of the Faculty of the Department of Medicine, be recommended for publication and binding upon the condition that four copies be deposited with the Librarian of the Leland Stanford Junior University, two of which shall be sent to the Lane Medical Library; *provided,* such publication shall not preclude the previous publication of such Thesis by the Divisions con-

cerned, but four copies must be deposited with the Librarian of the University as above specified.

All apparatus and appliances, models and preparations shall be the property of the Leland Stanford Junior University, and as such shall remain in charge of the Division under the direction of which they were prepared.

Advanced Degrees in the Medical Department

The Divisions of the Medical Department are considered as equivalent to other departments of the University in respect to candidacy and requirements for the degrees of Master of Arts and Doctor of Philosophy, and all the foregoing regulations apply to these divisions and division faculties as to departments and department faculties, with the following modifications and limitations:

1. Candidates for these degrees must have received the degree of A. B. at Stanford or an equivalent degree elsewhere, and must have completed all requirements for admission to the Department of Medicine, and such other requirements as each division faculty may prescribe.

2. Time spent in candidacy for the degree of Master of Arts or Doctor of Philosophy will not be counted toward the degree of Doctor of Medicine.

3. Candidates for these degrees in the divisions of Medicine, Surgery, and Obstetrics and Gynecology, must have received the degree of Doctor of Medicine.

THE CURRICULUM

First Semester

	Lec. hours	Lab. hours	Units of credit
Neurology—Gross and minute anatomy of the Brain and Spinal Cord	1	6	3
Histology	1	6	3
Gross Anatomy	1	10	4–7
Physiology—Muscle, nerve, circulation	1	5	3
Embryology		6	2
	4	33	15–18

SECOND SEMESTER

Neurology	1	6	3
Histology	1	6	3
Gross Anatomy	3	16	5–8
Physiology—Digestion, respiration, nutrition, metabolism, etc.	1	5	3
Organic Chemistry	3		3
Toxicology (optional)		[9]	[3]
	9	33	17–20

THIRD SEMESTER (First Semester of Second Year)

Bacteriology	2	7	3–6
Gross Anatomy	1	7	3–5
Pharmacology	2	5	4
Physiological Chemistry	3	9	6
Physiology — Nervous system, sense organs, etc.	1	5	3
	9	33	19-24

FOURTH SEMESTER (Second Semester of Second Year)

	Hours per week
Topographical and Applied Anatomy	9
Medicine (Physical Diagnosis, etc.)	4½
Surgery (Fractures, etc.)	4½
General Pathology (Lectures and Discussions)	5
Pathological Histology (Laboratory)	7½
Pharmacology and Materia Medica	3
Physical Therapeutics	2
	35½

FIFTH SEMESTER (First Semester of Third Year)

Medicine (Lectures and Clinics)	13½
Surgery (Lectures and Clinics)	7
Special Pathology	2
Clinical Pathology (Laboratory)	2½
Obstetrics	3
Surgical Pathology	4
Autopsy Work	2
	34

Sixth Semester (Second Semester of Third Year)

Medicine (Recitations and Lecture Work)	9½
Surgery (Recitations and Lecture Work)	7
Special Pathology	2
Surgical Pathology	4
Clinical Pathology (Chemistry)	2½
Autopsy Work	2
Neurology	2
Obstetrics	3
Pediatrics	2
	34

Seventh Semester (First Semester of Fourth Year)

Medicine	6
Surgery	4
Obstetrics	2
Ophthalmology	2
Genito-Urinary Diseases	2
Gynecology	3
Dermatology	1
Hygiene	1
Psychiatry (Lectures)	1
History of Medicine, etc. (Lectures or Discussions)	1
Neurology	2
Pediatrics	4
Ear, Nose, and Throat	2
Thesis	4
X-Ray Laboratory	1
	36

Eighth Semester (Second Semester of Fourth Year)

Medicine	5
Surgery	3
Obstetrics	2
Ophthalmology	2
Genito-Urinary Diseases	1
Gynecology	3
Dermatology and Syphilis	2
Hygiene	1
Legal Medicine (Lectures)	1
History of Medicine, Journal Club, Ethics, etc.	1

EIGHTH SEMESTER—Continued

Neurology	1
Pediatrics	4
Dietetics	1
Ear, Nose, and Throat	2
Thesis	4
	33

I. DIVISION OF ANATOMY

ARTHUR WILLIAM MEYER, Professor.
FRANK ELLSWORTH BLAISDELL, Assistant Professor.
——— ———, Instructor.
RUSSELL PAINE, Technical Assistant.

HUMAN ANATOMY

1. Osteology.—Students will be expected to familiarize themselves thoroughly on their own initiative with the surface anatomy of bones of the skeleton. The laboratory work will be supplemented by recitations and lectures dealing with the internal architecture, the development, growth, and regeneration of typical bones, their nutrition and innervation, the mechanics of the skeleton as a whole, and the changes it undergoes from birth to old age.

2 to 3 units, 1st semester (MEYER, ———)

2-3-4. Dissection of (2) the Head, Neck, and Thorax; (3) the Upper Extremity; (4) the Abdomen and Lower Extremity.—These courses are given simultaneously throughout the year and can be begun at any time. No one will be assigned to less than one of the above parts nor will credit be given for less, save by special arrangement.

2 to 5 or more units (MEYER, ———)

5. Topographical and General Applied Anatomy.—In this course special emphasis will be laid upon the laboratory study of frozen sections made in all planes, and special preparations of various regions and structures. Particular attention will be given to surface landmarks, palpable structures, segmental distribution of nerves, modifications of the vascular and lymphatic systems, to terminal and collateral circulation, epiphyseal relations, the sympathetic system in its relation to referred pain, etc., the deep fasciæ and their relation to effusions, contractures, etc., and to the practical aspects of anatomy as related to medicine, surgery, and the various specialties. Fourth semester, in San Francisco. (BLAISDELL)

Optional and Advanced Courses

6. **Topographical Anatomy.**—The work will consist of laboratory study of frozen sections of the cadaver, made in various planes, and of dissected and specially injected preparations. It is suggested that students who can afford the time supplement courses 2, 3, and 4 by the respective portions of course 7 immediately on completing the dissection of a part. Open to students who have completed courses 1, 2, 3, and 4. Third semester, by arrangement. (———)

7. **The Anatomy of the Central Nervous System.**—This course will consist of a laboratory study of the gross and microscopic anatomy of the adult human brain and spinal cord, with such references to embryology and comparative anatomy as will be found advisable. Open to a limited number of physicians and others by special arrangement. Twice or thrice weekly in the first semester. (Blaisdell)

8. **Developmental Anomalies.**—It is not the aim to exploit the rare and bizarre in this course. Until work in human embryology can be offered, however, an opportunity will here be given medical students to obtain some conception, even if necessarily inadequate, of the origin of such errors and defects in development as are most likely to come to the attention of the practising physician. Third semester. Once a week. Elective. (Meyer)

9. **The Evolution of Body Form.**—A course of lectures and recitations intended for students who desire to familiarize themselves with the development of body form, its modification by age, sex, occupation, race, etc. Embryology and physical anthropology will be generously drawn upon and the deviation of the artistic ideal from the anatomical norm indicated. Offered in 1913, by special arrangement only. Elective. (Meyer)

10. **Human Embryology.**—This course will be offered as soon as adequate provision can be made. Development of the chick as a prerequisite. Elective.

11. **Conferences on Assigned Topios.**—One hour a week per group will be devoted to a discussion of various anatomical problems and obscure relations by those who are dissecting or have dissected a given part. Second semester. Optional. (Meyer)

The facilities of the laboratory are always at the disposal of properly qualified students or physicians who desire to undertake the investigation of some problem in gross or microscopic anatomy or in embryology.

Requirements for Advanced Degrees

In addition to the requirements published in the University Register and the Announcement of the Department of Medicine, students desiring to be admitted to candidacy foı the degree of Master of Arts in Anatomy must have satisfactorily completed one year's work in histology and microscopic anatomy, at least one semester of embryology, and possess a knowledge of laboratory technique adequate for the investigation to be undertaken. For admission to candidacy for the degree of Doctor of Philosophy a reading knowledge of both French and German is further required.

Deposit Fees.—A deposit of $10, to cover damage to or loss of bones, is required of all students in Anatomy. This sum, less charges for damage or loss, is returnable at the close of the year. Students of Anatomy who are not medical students are charged a fee of $15 for courses 2, 3, and 4, and $5 for course 1.

Embryology.—Development of the chick through the first three days of incubation. [Course 11 in the Department of Zoology.]
2 units, 1st semester (Price)

II. DIVISION OF BACTERIOLOGY

Hans Zinsser, Professor.
——— ———, Assistant.
Arthur Meinhart, Technical Assistant.

1. **General Bacteriology.**—A practical laboratory course in which students become familiar with the preparation of media, general bacteriological technique, and study the pathogenic bacteria culturally. This course lays special stress on the relationship of bacteria to disease and problems of infection. Three laboratory periods and one lecture a week.
4 units, 3d semester (Zinsser, ———)

2. **Immunity.**—Lectures covering the problems relating to immunity against infectious diseases, and serum therapy. Demonstrations of serum technique. Three lectures weekly, third semester. This course is coördinated with course 1 and may be taken in conjunction with it.
(Zinsser)

3. **Bacteriology in Relation to Public Health.**—General bacteriological technique; bacteriology of soil, air, water, and milk. This course lays special stress on problems of hygienic interest; laboratory exercises on the examination of water, soil, and milk. One lecture and two laboratory periods. Elective. 3 units (Zinsser, ———)

4. Conferences on Recent Problems in Immunity.—Once a week in the form of a seminar. Open only to students who have taken courses 1 and 2. 1 unit, 2d semester (ZINSSER)

Properly qualified students or physicians will be admitted to the laboratory for special work.

Fees.—Students who are not medical students will be charged a laboratory fee of $10 per course, and will be required to make a deposit of $5 for breakage—returnable at the completion of course in proportion to apparatus returned.

III. DIVISION OF CHEMISTRY

JOHN MAXSON STILLMAN, ROBERT ECKLES SWAIN, Professors.
JOHN STEPHEN HORN, Assistant.

1. Organic Chemistry.—A lecture course embracing a study of the classification, structural formulæ, and properties of the more important compounds of carbon. The chemical relationships of the larger groups of organic compounds, alcohols, aldehydes, and ketones, acids, amines, and the halogen, sulphur, and nitrogen compounds will be emphasized, special attention being given throughout the course to those compounds which are of physiological and pathological interest. 3 units, 2d semester (SWAIN)

2. Toxicology.—A laboratory course, accompanied by informal lectures, dealing with the more important poisons, their physiological action and the prominent reactions employed in their identification. A search for the common poisons, based on a systematic scheme of analysis, will be made on artificially prepared materials. Students who have had no previous training in quantitative analysis will be given a preliminary course in volumetric and gravimetric analysis. 3 afternoons, 2d semester. Optional. (SWAIN)

3. Physiological Chemistry.—A laboratory course including a preliminary study of the proteins, carbohydrates, and fats, and the action of the various digestive fluids upon them, followed by a chemical examination of the bile, blood, milk, the chief tissues of the animal body, and the excretions. 3 afternoons, 3d semester (SWAIN)

4. Physiological Chemistry.—Lectures on the chemical composition and action of the tissues and secretions of the animal body, the digestion of foods and the elimination of waste products. 3 units, 3d semester (SWAIN)

[Students enrolled as Medical students will be required to deposit $10 breakage fee for the laboratory courses in Toxicology and Physiological Chemistry. Other University students will pay the usual fee of $25.]

IV. DIVISION OF HYGIENE AND PUBLIC HEALTH

WILLIAM FREEMAN SNOW, Clinical Professor.

1. Hygiene.—This course is divided as follows:

(*a*) Required reading, covering the usual information essential to an understanding of the principles of public health and hygiene;

(*b*) Lectures on organized public health work, covering the administration of federal, state, and local health departments (1st semester);

(*c*) Lectures on Medical Sociology, covering the activities of various types of welfare organizations (2d semester).

The practicing physician's duties and the opportunities in the field of preventive medicine are emphasized and illustrated by field trips to quarantine stations and health departments.

V. DIVISION OF MEDICINE

RAY LYMAN WILBUR (executive), JOSEPH OAKLAND HIRSCHFELDER, Professors.

WILLIAM FITCH CHENEY, LANGLEY R. PORTER, Clinical Professors.

HARRY R. ALDERSON, Associate Clinical Professor.

THOMAS ADDIS, Assistant Professor.

EMANUEL C. FLEISCHNER, MORTON R. GIBBONS, WALTER W. BOARDMAN, Clinical Instructors.

HOWARD FELIX ADLER, WALTER CLEMENT, ALVAREZ, WILLIAM HENRY BANKS, WILLIAM REDWOOD PRICE CLARK, CLARENCE E. HYDE, GEORGE DUNLAP LYMAN, PETER HARRISON LUTTRELL, WALTER F. SCHALLER, HERBERT F. YERINGTON, FLORENCE MABEL HOLSCLAW, ROY MORRIS, LOUIS D. MEAD, Assistants.

SUBDIVISIONS

PEDIATRICS	DERMATOLOGY AND SYPHILIS
NEUROLOGY	ELECTROTHERAPY
PSYCHIATRY	TROPICAL MEDICINE
JURISPRUDENCE	DIETETICS

The instruction in Medicine begins in San Francisco with the fourth semester, with practical work in Physical Diagnosis and lectures and demonstrations in Physical Therapeutics. From the fifth to the eighth

semester inclusive, the general field of Medicine will be covered by means of clinics, practical demonstrations, bedside instruction, and clinical laboratory work. As far as feasible didactic and theoretical teaching will be made secondary to demonstrations and individual work on the part of the student. Therapeutics will be taught in immediate connection with Medicine.

1. **Physical Diagnosis and Introduction to Medicine.**—This course lays the foundation for the work of Medicine of the third and fourth years, and consists largely of practical instruction in connection with the dispensary, in the methods of physical diagnosis and in history taking. 4½ hours, 4th semester (WILBUR, ADDIS)

2. **Physical Therapeutics.**—In this course is given a practical discussion with demonstrations, of various methods aside from drugs, for the treatment of disease, with particular reference to the physiological problems involved. Hydrotherapy, Balneotherapy, Climatology Electrotherapy, Gymnastics, and Massage are particularly considered. 2 hours, 4th semester (WILBUR)

3. **Medicine, Section Work, and Clinics.**—Throughout the seventh semester for two hours each morning, the students will spend their time in the dispensary or wards in practical medical work and in attending clinics and recitations. One hour per week will be devoted entirely to the discussion of assigned topics. At least once per week a general clinic for third- and fourth-year students will be given.
11 hours, 5th semester (WILBUR, CHENEY, ADDIS)

4. **Medicine, Section Work, and Clinics.**—Three mornings per week a period of two hours of practical medical work at the Lane Hospital and in the Dispensary, together with a weekly clinic for third- and fourth-year students.
7 hours, 6th semester (WILBUR, CHENEY, ADDIS)

5. **Medicine: Recitations and Demonstrations, Experimental Medicine.**—Throughout the year the third year class will spend two and one-half hours per week in recitations covering assigned text book work and in a discussion with demonstrations of pathological physiology. 2½ hours, 7th and 8th semesters (WILBUR, ADDIS)

6. **Clinical Pathology.**—One afternoon, laboratory period, with some lectures, in microscopical and clinical diagnosis, including the methods of examining blood, urine, sputum, gastric contents, faeces, etc.
2½ hours, 5th and 6th semesters (ADDIS)

7. **Pediatrics.**—Recitations and demonstrations in connection with the Dispensary. A certain amount of section work in the Clinic will also be offered.

2 hours, 6th semester (PORTER, FLEISCHNER)

8. **Nervous Diseases.**—Recitations and demonstrations in the Dispensary. 2 hours, 6th semester (HIRSCHFELDER)

9. **Medicine: Ward Work and Clinics.**—Lane Hospital. The Senior class is divided into two sections. Section I is assigned to Lane Hospital for the mornings of the 7th semester and Section II for the 8th semester. Four hours per week will be devoted to bedside study of medical cases, and there will be a weekly clinical conference.

5 hours, 7th and 8th semesters (WILBUR)

10. **Medicine: Ward Work and Clinics.**—San Francisco Hospital. The Senior class is divided into two sections. Section II is assigned to the San Francisco Hospital for the mornings of the seventh semester, and Section I for the eighth semester. Five hours will be given to bedside instruction, and there will be a set medical clinic Saturday forenoon.

6 hours, 7th or 8th semester (———)

11. **Neurology.**—Lane Hospital. A weekly clinical conference will be held in connection with the outpatient dispensary and the wards of the Hospital. 1 hour, Section 1, 7th semester; Section II, 8th semester. (———)

12. **Neurology.**—San Francisco Hospital. Two hours per week are assigned for the clinical study of the neurological cases in the Stanford wards at this Hospital. 2 hours, Section 1, 8th semester; Section II, 7th semester. (———)

13. **Pediatrics.**—Lane Hospital and Outpatient Department. Four hours of clinical work weekly consisting of a study of the cases in the children's ward and of clinical lectures in the dispensary. 4 hours, Section I, 7th semester; Section II, 8th semester (PORTER)

14. **Pediatrics.**—Recitations. The general field of Pediatrics will be reviewed by means of recitations, lectures, quizzes, and demonstrations. 2 hours, 7th and 8th semesters (PORTER)

15. **Psychiatry.**— A weekly lecture and clinic upon mental diseases. 1 hour, 7th semester (———)

16. Dermatology and Syphilis.—A weekly clinical demonstration in Lane Hospital or the Dispensary.

1 hour, 7th semester (ALDERSON)

17. Dermatology and Syphilis.—Two hours per week of clinics, recitations, and demonstrations upon the diseases of the skin.

2 hours, 8th semester (ALDERSON)

18. History of Medicine.—In association with the other divisions a weekly lecture or recitation will be held. The aim will be to have each division present the historical side of Medicine which is of most interest to it. The students will be assigned a certain amount of journal and other preparatory work. 1 hour, 7th and 8th semesters.

(OPHÜLS, STILLMAN, SPALDING, SNOW, WILBUR)

19. Jurisprudence.—The instruction in this course will be divided among the various divisions, each one covering the points most essential to it. 1 hour, 8th semester.

(OPHÜLS, STILLMAN, SPALDING, SNOW, WILBUR)

20. Dietetics.—A recitation and lecture course of one hour per week. 1 hour, 8th semester (———)

21. Experimental Medicine.—Well equipped laboratories for medical research are available to capable students. The facilities of the wards and the dispensary may be used in association with this work. Optional. (WILBUR, ADDIS)

22. A special course will be offered to well trained physicians in the laboratories and the dispensaries and hospitals. Such students may register for advanced degrees, or as "Special Workers."

(WILBUR, ADDIS)

VI. DIVISION OF OBSTETRICS AND GYNECOLOGY

ALFRED BAKER SPALDING, Professor.
GEORGE B. SOMERS, Clinical Professor of Gynecology.

1. Obstetrics Recitations, Demonstrations, and Manikin Exercises.—The general principles of Obstetrics are considered in this course. Two hours a week are devoted to recitations. These hours are alternated with one hour a week which is devoted to the presentation of pathological specimens, clinical conferences, and exercises in obstetrical examination and operative procedures on the manikin.

3 hours, 5th and 6th semesters (SPALDING, ———)

2. **Practical Obstetrics.**—For periods of two weeks, the Senior student is detailed for his entire time as assistant to the Obstetrical interne. During this period he takes histories, examines ante-partum and post-partum patients, attends out patients in labor, assists the interne with ward patients in labor, witnesses operations, makes daily rounds of the Hospital cases, makes milk mixtures under supervision in the milk laboratory, and visits the home patients during the puerperal period. 4 hours, 7th semester (———)

3. **Gynecology.**—Recitations. Particular attention is devoted to the subjects of pathology and diagnosis. Recitations are interspersed with demonstrations on manikins, models, pathological specimens, and microscopic slides and clinical conferences for the study of the more common gynecological ailments.

2 hours, 7th and 8th semesters (Spalding, ———)

4. **Practical Gynecology.**—In this course instruction in history taking, pelvic examinations, cystoscopic examinations, and non-operative treatment in the dispensary is alternated with instruction in operating room technique, assisting in minor operations, and examination of ward patients before and after operation.

2 hours, 8th semester (Spalding, ———)

5. Courses for graduates will be arranged on application.

VII. DIVISION OF PATHOLOGY

William Ophüls, Professor.
Ernest Charles Dickson, Assistant Professor.
Gertrude Annie Daly, Technical Assistant.

1. **General Pathology.**—A course of lectures, recitations, and demonstrations which, following a general introduction into the field of Pathology, covers the relations of the properties of living protoplasm and of the body cells to pathological conditions, heredity in disease, disturbances in circulation, regressive and progressive tissue changes, inflammation, and tumors.

5 hours a week, 4th semester (Ophüls, Dickson)

2. **Pathological Histology.**—A laboratory course in which the student studies the microscopic lesions in pathological conditions of various organs with demonstration of gross specimens.

7½ hours a week, 4th semester (Ophüls, Dickson)

3. **Special Pathology.**—A course of demonstrations of fresh and preserved, gross and microscopic specimens illustrating the most im-

portant chapters of Gross Morbid Anatomy. Part of the time will be devoted to the technique of postmortem examinations.

4 hours a week, 5th and 6th semesters (OPHÜLS, DICKSON)

4. Advanced Work in Special Pathology.—An elective course in Special Pathology is offered to students in the seventh and eighth semesters. Students taking this course will assist at necropsies on Saturday mornings and as often as possible at other times. The students are required to work up the histological or the bacteriological problems connected with the necropsies which they attend. For this work they will be given facilities in the laboratory. A deposit of $5 will be required to cover such material as is used by the students desiring to follow the course. Such part of this as is not drawn against will be refunded at the end of the course. At present attendance on this course will be limited to one semester. (OPHÜLS, DICKSON)

5. Applied Bacteriology.—An elective course in Applied Bacteriology will be offered to students in the seventh and eighth semesters. Students taking this course will receive instruction in the methods of bacteriological examination of blood, stools, urine, pus, etc., and in the performance of serum reactions. The students will be required to assist with, and whenever possible to perform, such minor operations as are required to obtain the material, and also to complete the examination of the specimens. Laboratory space and facilities for obtaining supplies will be given. A deposit of $5 will be required to cover the cost of such material as will be needed, of which such part as is not drawn against at the termination of the course will be refunded. At present attendance upon this course will be limited to one semester.

(DICKSON)

6. Research Work in the Pathological Laboratory.—Students wishing to do special work in the Pathological Laboratory should have finished courses 1 and 2. They should consult with the executive of the division in regard to the selection of a proper subject for investigation. Regular attendance is required. A deposit of $10 will be required to cover such material as is used by the student in the course of his work. Such part of this as is not drawn against will be refunded at the end of the work. Work may be undertaken during the summer vacation. The same regulations apply to work on theses or for advanced degrees in the Division except that in the latter case the student also should have finished course 3.

(OPHÜLS, DICKSON)

VIII. DIVISION OF PHARMACOLOGY

Albert Cornelius Crawford, Professor.

1. **Pharmacology and Materia Medica.**—In the course in Pharmacology emphasis is placed on laboratory work. At present this occupies three hours weekly during the first semester. In this course the student performs for himself, or has demonstrated to him by the other members of the class, not only the important experiments which illustrate the fundamental principles of pharmacology, but sees one or more experiments on all of the more important drugs. This serves to vitalize the work and render the details less burdensome. The relation of the laboratory work to rational therapeutics is constantly kept in mind. The lecture course embraces two hours weekly during the first semester, with one weekly conference. During the second semester the lectures are replaced by recitations. It is essential that all students who take this course shall have finished at least one course in physiology and organic chemistry.

2. **Graduate Course.**—The laboratory is open throughout the year to properly qualified students who wish to carry on independent work in pharmacology.

IX. DIVISION OF PHYSIOLOGY

Oliver Peebles Jenkins, Frank Mace McFarland, Professors.
Clara S. Stoltenberg, Associate Professor.
James Rollin Slonaker, Assistant Professor.
Frank Walter Weymouth, Instructor.

1. **Physiology of Muscle, Blood, and Circulation.**—An experimental course covering the ground represented in Foster's Physiology, Part I, or Howell's Text-book on the same subjects. (One lecture and five laboratory hours per week.) [Course 2 in the Department of Physiology and Histology.]

3 units, 1st semester (Jenkins, Slonaker)

2. **Physiology of Digestion, Respiration, Elimination of Wastes, Metabolism, and Nutrition.**—Follows course 1. An experimental course, with Foster's Physiology, Part II, and Howell's Text-book, as texts. (One lecture and five laboratory hours per week.) [Course 3 in the Department of Physiology and Histology.]

3 units, 2d semester (Jenkins, Slonaker)

3. **Structure of the Nervous System.**—The course consists of the dissection and comparative study of a series of vertebrate brains, including the human brain and cord, also the peripheral nervous system; abundant material is provided, also such necessary helps as the latest models and charts. For texts the student will use Quain, Edinger, and Barker. (One lecture and five laboratory hours per week.)

3 units, 2d semester (STOLTENBERG)

4. **Anatomy and Histology of the Sense Organs.**—The course is planned to accompany course 3, the two being designed to give the gross and minute anatomy of the central nervous systems and sense organs. The texts necessary for the student's use are Quain and Barker. (One lecture and five laboratory hours per week.)

3 units, 1st semester (STOLTENBERG)

5. **Histology.**—The study of the structure of the cell and its general phenomena, the fundamental tissues and the outline of their development in a comparative way, occupy the first semester. In the second, the microscopic anatomy of organs, except those of the nervous system and special senses [see courses 3 and 4], is dealt with. Elementary histological technique is taught during the course. (One lecture and six laboratory hours per week.) [Course 9 in the Department of Physiology and Histology.]

3 units, 1st and 2d semesters (MCFARLAND)

6. **Physiology of the Nervous System and Sense Organs.**—An experimental course in these subjects, designed to follow courses 3 and 4. Texts: Foster, Howell's Text-book. (One lecture and five laboratory hours per week.) [Course 6 in the Department of Physiology and Histology.]

3 units, 3d semester (JENKINS)

7. **Journal Club.**—Students in the advanced classes will be expected to meet once a week to discuss current literature in Physiology and Histology. [Course 15 in the Department of Physiology and Histology.]

1 unit, 3d semester (DEPARTMENT FACULTY)

8. The advanced or research courses in Physiology and Histology are open to those who are qualified to take them up. For details, see the University Register.

X. DIVISION OF SURGERY

STANLEY STILLMAN (executive), ADOLPH BARKAN (emeritus), EMMET RIXFORD, Professors.

RUFUS L. RIGDON, ALBERT B. MCKEE, EDWARD CECIL SEWALL, Clinical Professors.

JAMES EAVES, Instructor.

WALTER W. BOARDMAN, Actinographer of Lane Hospital.

ISAAC WALTER THORNE, WALTER HOEPFNER WINTERBERG, Assistants in Clinic.

SUBDIVISIONS

OPHTHALMOLOGY
OTOLOGY, RHINOLOGY, AND LARYNGOLOGY
GENITO-URINARY DISEASES
RADIOGRAPHY

Instruction in Surgery begins in the fourth semester, with recitations and demonstrations in General Surgery, *i. e.*, the principles of surgery, surgical pathology, and the surgical diseases, together with recitations and demonstrations in fractures, dislocations, and deformities—subjects for which the student, having completed his anatomy, is properly prepared. The systematic text-book and lecture work in Regional Surgery is completed in the fifth and sixth semesters. The work of the seventh and eighth semesters is entirely clinical. The general field will be covered by means of clinics, practical demonstrations, bedside instruction, and work in the laboratory of Surgical Pathology.

1. Fractures, Dislocations, and Deformities.—Recitations, demonstrations, study of X-Ray plates, and experimental fractures and dislocations in the surgical laboratory.

2 hours, 4th semester (RIXFORD)

2. General Surgery (Surgical Pathology and Principles of Surgery)—Recitations, demonstrations, and laboratory work utilizing clinical and pathological material from the Dispensary and Lane Hospital, and preparations from the museum and laboratory of Surgical Pathology. 2½ hours, 4th semester (STILLMAN, EAVES)

3. Regional Surgery.—Recitations and discussions covering the entire field in preparation for clinical work of the 7th and 8th semesters.

3 hours, 5th and 6th semesters (STILLMAN, RIXFORD)

4. Special Surgical Pathology.—Laboratory work, recitations, and demonstrations on tumors, the study of gross specimens, and work

with the microscope, utilizing pathological material from the Dispensary and Hospital operating rooms.

4 hours, 5th and 6th semesters (EAVES)

5. **Surgical Clinics and Section Work.**—Formal class clinics and section work in the Dispensary and Surgical ward of Lane Hospital; history taking.

4 hours, 5th and 6th semesters (STILLMAN, EAVES)

6. **Surgery.**—Ward work and Clinics, Lane Hospital. The Senior class is divided into two sections. Section I is assigned to Lane Hospital for the mornings of the 7th semester, and Section II for the mornings of the 8th semester. Two hours per week will be devoted to operations and bedside study of hospital cases. There will be a clinical conference or a formal clinic Thursday mornings.

3 hours, 7th or 8th semesters (STILLMAN).

7. **Surgery.**—Ward work and Clinics, City and County Hospital. Section II of the Senior class is assigned to the City and County Hospital for the mornings of the 7th semester, and Section I for the mornings of the 8th semester. Three hours per week will be spent either in the wards or operating room and there will be a set Surgical Clinic each Saturday forenoon.

4 hours, 7th or 8th semesters (RIXFORD)

8. **Ophthalmology.**—Demonstrations, recitations, and clinics. This course will cover in a practical way the general field of diseases of the eye. Instruction will be given in the use of the ophthalmoscope, perimeter, etc. 2 hours, 7th and 8th semesters (MCKEE)

9. **Otology, Laryngology, and Rhinology.**—Demonstrations, recitations, and clinics. The diseases of the ear, nose, and throat will be covered in a general way, and the practical use of the important diagnostic instruments will be taught.

2 hours, 7th and 8th semesters (SEWALL)

10. **Genito-Urinary Surgery.**—Recitations, quizzes, and clinics. The course will include practical work in the Dispensary and training in the use of the urethroscope and cystoscope. Special attention will be devoted to the investigation of the upper urinary tract. Operative clinics will be held once per week. 3 hours, Section I, 7th semester; 3 hours, Section II, 8th semester. (RIGDON)

11. **Orthopedic Surgery.**—Clinics and demonstrations. This course will cover the general field of orthopedic surgery. 2 hours, Section I, 7th semester; 2 hours, Section II, 8th semester (———)

12. **Actinography.**—Practical instruction in the Roentgen Ray laboratory of the Lane Hospital (including radiotherapy) and plate interpretation. 1 hour, Section I, 7th semester; 1 hour, Section II, 8th semester. (BOARDMAN)

13. Special courses will be offered to well trained physicians in the laboratory of Surgical Pathology and in the Dispensary and Hospitals. Such students may register for advanced degrees or as Special Workers. Optional. (STILLMAN, RIXFORD)

14. **Operative Surgery.**—A course will be given in the 7th and 8th semesters on Operative Surgery on the cadaver and in the Pathological laboratory. Optional. (EAVES)

MARINE BIOLOGICAL LABORATORY

Professors CHARLES HENRY GILBERT and OLIVER PEEBLES JENKINS, Directors.

Professor FRANK MACE MCFARLAND, Assistant Professor LEONAS LANCE BURLINGAME, and Acting Instructor FRANK WALTER WEYMOUTH.

The Laboratory buildings are located at Pacific Grove, two miles west of Monterey, and stand on a low bluff immediately facing the sea. They consist of two two-story structures capable of accommodating about eighty students, and contain four general laboratories, one lecture-room, seventeen private rooms for special investigators, and a dark-room for photography. They are provided with aquaria, running water, and all necessary facilities for biological study. The library and apparatus of the University are available for use in the Laboratory.

SESSION OF 1911

The Twentieth Session began Wednesday, May 31st, and extended over a period of six weeks, closing Tuesday, July 11th. The laboratory was under the general supervision of Professor MCFARLAND.

COURSES OF INSTRUCTION

1. **General Zoology.**—An elementary course open to all students and to teachers and others who desire an acquaintance with the anatomy and life-history of marine animals, and with the methods pursued in laboratory study. One lecture a day, the remainder of each day being spent in the laboratory or on the collecting grounds under the immediate direction of the instructor.

2. Zoology.—Open to students who have had course 1 in Zoology or Physiology, or an equivalent. The object of this course is primarily to enable students to gain a wide general knowledge of marine forms, and to this end special attention is devoted to collecting both along the shore at low tide and at the surface of the ocean. Material thus collected is studied in the laboratory, and in this work students are encouraged to consult the zoological literature. Occasional lectures.

3. General Embryology.—A laboratory course in the general principles of the development of Invertebrate and Vertebrate forms, supplemented by lectures and assigned reading, and including the histogenesis of the reproductive cells, the maturation, fertilization, and early cleavage of the egg, and the formation of the germ layers, larval stages, and the early development of one or more Vetebrates. Open to students who have had at least a year's work in Zoology or Physiology.

4. Research in Histology or Cytology.—Opportunity is given to a limited number of students, with suitable preparation, to take up original investigation in the above subjects under such guidance and advice as may be necessary. The work is planned to suit the inclinations and needs of the individual student. Arrangements for this work are made by personal consultation or correspondence before the beginning of the session.

Registration

The sessions of the Marine Biological Laboratory constitute an integral part of the biological work of Stanford University. Students register for this work at Pacific Grove at the beginning of the session, and receive upon its successful completion five units of University credit.

Expenses

A laboratory fee of *twenty-five dollars* is payable in advance. To investigators prepared to carry on original work, the use of the laboratory is tendered free of charge. Applicants for these privileges are expected to satisfy the directors as to their preparation for such work. Pacific Grove being a popular seaside resort, and the home of the Chautauqua Assembly and of numerous conventions, is well supplied with boarding accommodations with a considerable range in price, and also with cottages furnished for housekeeping. Students

pay on an average about one dollar per day for room and board. Some small groups of students form clubs, rent cottages, and manage their own housekeeping, thus reducing their living expenses.

UNIVERSITY LIBRARY

George Thomas Clark, Librarian.
[1]John Edwin Goodwin, Assistant Librarian.
Helen Binniger Sutliff, Head Cataloguer.
Alice Newman Hays, Classifier.
Maida Rossiter, Reference Librarian.
Charles V. Park, Chief of Loan Desk.
May Franklin, Head of Order Department.
Lucia May Brooks, Head of Serial Department.

The Library is housed in the Thomas Welton Stanford Library Building, which forms the central portion of the easterly half of the outer quadrangle façade. On the main floor are the general reading rooms, with accommodations for 220 readers, the reference room, serial room, and catalogue room. . On the second floor are six seminary rooms used exclusively by the Departments of Economics, English Literature, Germanic Languages, Greek, Latin, and History.

The Library is open during term time on week days from 8:00 a.m. to 10:00 p.m., except on Saturdays, when it is closed at 3:30 p.m.

During the short vacation the hours are from 8:00 a.m. to 4:00 p.m., Saturdays to 12:30 p.m., and during the long vacation, from 9:00 a.m. to 4:00 p.m., Saturdays 9:00 a.m. to 12:00 m. The shelves are open to members of the faculty, and to students engaged in advanced work upon the recommendation of their instructors. Books, other than works of reference, not required for class use, are lent for a period of two weeks.

Including the departments of Law and Medicine the Library contains upwards of 210,000 volumes, and the number is rapidly increasing. Noteworthy special collections are as follows:

The Jordan Library of Zoology.—A collection consisting largely of works on ichthyology, to a considerable extent made up of a vast number of authors' separates, which have been accumulated by President Jordan, bound in convenient form, indexed and catalogued. The more voluminous publications, such as the works of Cuvier, Lacépède, Bloch, Bleeker, Gunther, and others, are well represented. These, supplemented by the proceedings of various

[1]Resigned December, 1911.

societies and institutions, make a collection of books of great value to advanced students and investigators in ichthyology. The library is conveniently arranged, and is situated in the Zoology building near the laboratories and collections.

The Barbara Jordan Library of Birds.—A memorial collection presented by President Jordan, and to which frequent additions are made. While some of the older texts are not represented, it is a good working library of ornithology and contains the principal modern works on the subject.

The Hopkins Railway Library.—A collection of approximately 10,000 volumes and pamphlets dealing with the subject of transportation. In 1892 Mr. Timothy Hopkins, of San Francisco, presented to the University his private library on railroads, consisting of about 2,000 books, personally providing for its maintenance and growth for many years. At present there is an annual library appropriation for this purpose. The collection is shelved by itself in one of the seminary rooms. It is general in scope, intended to embrace all subjects touching on the building, maintenance, and operation of railways. It is especially rich in state and government reports, as well as in reports of individual railroads both in the United States and Europe, with much material pertaining to their history.

The Hildebrand Library.—In 1895 the University acquired the library of the late Professor Hildebrand, of Leipzig, containing more than 5000 volumes and pamphlets relating largely to Germanic languages and literature, the seventeenth and eighteenth centuries being especially well represented, and including also a notable collection of three hundred old dictionaries. The value of the books is greatly enhanced by the manuscript notes of Professor Hildebrand.

The Thomas Welton Stanford Australasian Library.—A good working collection of books relating to Australia and New Zealand. It is especially rich in early voyages, travels, and descriptions. Several hundred volumes of parliamentary reports of the Australian states, the Commonwealth, and New Zealand, are included. The publications of learned societies, such as the Royal Societies of New South Wales and Victoria, the Australian Museum, and the New Zealand Institute, are well represented, while considerable pamphlet material also is available.

The Jarboe Collection on the French Revolution.—Acquired in 1910. It contains original materials, principally in French, relating to the Revolutionary and Napoleonic era. Two features of the collection are of particular interest to advanced students of history —the original and contemporaneously printed pamphlets, of which many are unusual; and the memoirs, of which there is a comprehensive selection.

The Lane Medical Library.—Founded by the directors of Cooper Medical College in accordance with the bequest of Mrs. L. C. Lane, and occupying rooms in the Cooper College building, Sacramento and Webster streets, San Francisco. It contains over 35,000 volumes, and is particularly rich in its collection of medical and allied periodicals. The leading domestic and foreign journals are currently received.

Students may also have access to the geological library of Professor Branner, in room 333, Geology building. It contains over 30,000 books, pamphlets, and maps, relating chiefly to geology, mineralogy, paleontology, geography, exploration, metallurgy, and mining, including most of the state and government reports and the publications of scientific societies in all parts of the world. Particulars regarding the sets may be seen at the Reference Desk in the general library.

THE MEMORIAL CHURCH

The Rev. David Charles Gardner, Chaplain.
Godfrey Carl Buehrer, Organist.

Pending the restoration of the Memorial Church, the Sunday services of public worship are held in the lecture room commonly called the University Chapel. A daily Chapel service is held in the vestry of the Memorial Church at 8 a.m.

The following special preachers have been invited to occupy the chapel pulpit on alternate Sunday mornings during 1911-12:

September 17, 1911—Dr. Hays, Chicago (Methodist).

October 1—The Rev. Robert Freeman, Pasadena (Presbyterian).

October 15—The Rt. Rev. William Ford Nichols, San Francisco (Episcopalian).

October 28—The Rev. C. F. Blaidsell, Redlands (Episcopalian).

November 12—The Rev. Bradford Leavitt, San Francisco (Unitarian).

November 26—Rabbi MEYER, San Francisco (Hebrew).

January 14, 1912—The Rev. Bishop EDWIN HOLT HUGHES, San Francisco (Methodist).

January 28—The Rev. ALBERT W. PALMER, Oakland (Congregationalist).

February 11—The Rev. F. L. GOODSPEED, Oakland (Presbyterian).

February 25—Rev. W. C. EVANS, San Francisco (Methodist).

March 10—Mr. CHARLES D. HURREY, New York (Methodist).

March 24—Dean EARL MORSE WILBUR, Berkeley (Unitarian).

April 21.—The Rev. THOMAS FRANKLIN DAY, San Anselmo (Presbyterian).

April 28—The Rev. FREDERICK W. CLAMPETT, San Francisco (Episcopalian).

May 12—The Rev. G. E. BURLINGAME, San Francisco (Baptist).

May 19—The Rev. CHARLES FREDERICK AKED, San Francisco (Congregationalist).

MUSIC

GODFREY C. BUEHRER, Organist and Director.

Courses in Musical Theory, and classes in ensemble singing and playing constitute the musical work.

1. **Theory of Music.**—The course in theory comprises elementary and advanced work in harmony, counterpoint, musical form and analysis, history of music, ear-training, and sight singing.

Students taking this course must also enroll in one of the ensemble classes. Music *d* and Music *e* represent the theoretical courses. Music *e* requires satisfactory passing in Music *d*.

2 units, both semesters (BUEHRER)

2. **Ensemble Classes.**—There are three classes in ensemble music. Music *a* and Music *b* represent the vocal, and Music *c* the orchestral sections. The classes in ensemble music are required to sing or play in the University Chapel; Music *a* and Music *b* sing every other Sunday, and Music *c* plays on one Sunday of every month. Music *b* requires a year's experience in Music *a*, or its equivalent; Music *c* requires proficiency in playing an orchestral instrument.

1 unit, both semesters (BUEHRER)

LECTURES, RECITALS, LITERARY CONTESTS, HONORS, AND CLUBS

University Lectures

April 6, 1911. President David Starr Jordan—*The Earthquake and its Effects.*

April 26. Dr. Emmet Rixford—*Feet and Footwear.*

January 18, 1912. Professor Caspar Rene Gregory, University of Leipzig—*Mount Sinai: Its Monasteries and Manuscripts.*

February 7, 1912. Har Dayal—*Systems of Oriental Philosophy.*

February 8. Har Dayal—*Problems of Oriental Philosophy.*

February 13. President David Starr Jordan—*Country Life in Japan.*

April 10. Judge P. F. Gosbey, San Jose—*Juvenile Court Work.*

April 11. Professor Charles T. Currelly, Director of the Royal Ontario Museum, Toronto, Canada—*Egyptian Tombs.*

April 22. Miss Edna L. Rich, President Santa Barbara State Normal School—*Vocational Opportunities.*

April 26. Prince Sarath Kumar Ghosh, India—*The Marvels of India.*

Musical and Dramatic Recitals

April 5, 1911. Concert by Combined Musical Clubs.

May 4. Presentation of Gounod's cantata *Gallia,* by the University Orchestra and Choir, and *A Half Hour with Brahms,* by the Pasmore Quartet.

May 17. Presentation of A. W. Pinero's *The Amazons,* by the Senior Class.

September 29. Presentation of Charles F. Nirdlinger's *World and His Wife,* by "Sword and Sandals."

October 6. Concert by Sousa's Band.

October 20. Presentation of Soupé's *Fatanitza,* by the Schubert Club.

November 24. Presentation of Professor Henry David Gray's *Compromise,* by the English Club.

February 9, 1912. Presentation of J. M. Barrie's *Admirable Crichton,* by "The Masquers."

March 15. Presentation of Madeleine Ryley's *Christopher Junior,* by the Sophomore Class.

University Assemblies

August 31, 1911. Professors John Casper Branner, John Maxson Stillman, Ellwood Patterson Cubberley, The Reverend D. Charles Gardner.

September 6. Karl Ludwig Schaupp, Miss Nina Ethel Moise, Daniel Wellman Burbank, Hans Christian Nelson, Almon Edward Roth.

September 18. Dr. Inazo Nitobe, Tokio, Japan—*Peace Over the Pacific.*

November 1. President David Starr Jordan, Professor John Casper Branner, Karl Ludwig Schaupp

December 6. Mr. Hamilton Bolt, New York City—*The Federation of the World.*

January 12, 1912. Mr. Alfred Mosely, London, England—*Modern Tendencies.*

February 8. President David Starr Jordan—*The Unseen Empire of Finance.*

February 19. Dr. Wilfred Grenfell, Labrador.

March 6. Mr. William George, Freeville, New York.

Commencement Address—May 22, 1911

The Rt. Rev. Charles David Williams, Detroit, Michigan—*The New Patriotism and Its Appeal to the College Graduate.*

President David Starr Jordan—*The Use of Time.*

Founders' Day—March 9, 1912

Address by the Hon. Horace Davis, LL.D.—*An Afternoon View of College Life.*

Under Auspices of the Young Men's Christian Association

The Rev. Carl M. Warner—*The Surrendered Life.*

The Rev. Hugh A. Moran—*Experiences in China* (Illustrated).

The Rev. Roy H. Campbell—*The Bible in Student Life.*

Professor Augustus Taber Murray—*College Men and Religion.*

Thomas Hanny—*Consecrated Service and Men.*

Dr. Ray Lyman Wilbur—*Medical Lecture.*

Judge J. F. Rutherford—*The Bible and Science.*

Dr. F. O. Leiser—*The Awakening of China.*

Mr. Edgar M. Robinson—*Service to Boys.*

Dr. David Starr Jordan—(1) *Resolutions and Decisions;* (2) *The Young Man in Politics.*

Mr. Jos. C. Westenburg—*The White Slave Traffic* (Illustrated).

Mr. Gale Seaman—*Christian Work in Our Colleges* (Illustrated).

Mr. Harry S. Warner—*College Men in Anti-Liquor Work.*

Dr. C. A. Barbour—*What is Worth While.*

Mr. Raymond Robins—*College Men and Social Justice.*

Mr. Chas. D. Hurrey—*Behind the Scenes in College Life.*

Mr. Paul C. Brown—*Christian Efficiency.*

Dr. Arthur H. Smith—*The Educated Men and Women and a World Wide Outlook.*

Mr. John G. Magee—*Student Volunteer Movement.*

The Raymond Fred West Memorial Lectures on Immortality, Human Conduct, and Human Destiny

"In memory of our beloved son, Raymond Fred West, a student in Leland Stanford Junior University, who was drowned in Eel River, California, on January 16, 1906, before the completion of his college course, we wish to present to the trustees and authorities of the Leland Stanford Junior University, at Palo Alto, California, the honored Alma Mater of our son, the sum of ten thousand dollars, to be held as a fund in perpetual trust, for the establishment of a lectureship on a plan similar to the Dudleian Lectures and the Ingersoll Lectures at Harvard University. . . . .

"It is our wish that such lectures shall not form part of the usual college or university course, nor shall they be delivered by any professor or instructor in active service in the institution. Such lecturer may be a clergyman or a layman, a member of any ecclesiastical organization, or of none, but he should be a man of the highest personal character and of superior intellectual endowment. He shall be chosen by the Faculty and the Board of Trustees of said University in such manner as the said Board of Trustees may determine, but the appointment in any case shall be made at least six months before the delivery of said lecture . . . .

"The course of lectures shall be known as the 'Raymond Fred West Memorial Lectures on Immortality, Human Conduct, and Human Destiny.'"

In accepting this gift from the donors, Mr. and Mrs. Fred West, of Seattle, Washington, and establishing the lectureship as provided in

the terms of the gift, the University has adopted the following plan and regulations:

That these lectures be delivered on alternate years, the first in the year 1911; that the lecturer give at least three lectures; that these lectures be published in book form within not less than two years; that the lecturer have the option of publishing them himself, in which case the University will purchase a hundred copies, or of having the University publish them, in which case it will retain the copyright. In any case, the manuscript of the lecturer must be filed in the University archives;

That the honorarium given be decided in each case by the Board of Trustees, and that unless otherwise ordered the entire earnings of the West fund for the two years be devoted to honorariums and to the purpose of publication;

That the West Lecturer be each time nominated by the President, with the approval of the Advisory Board, and the consent and ratification of the Board of Trustees, as is the case with ordinary appointments.

The first series of the West lectures was given in 1911 by the Rev. Charles E. Jefferson, D. D., of the Broadway Tabernacle, New York. The lectures have been published by Houghton, Mifflin & Company, under the title of "Why We May Believe in Life After Death."

The Bonnheim Ethical Dissertations and Discussion

The purpose of the Bonnheim dissertations and discussion, as defined by the founder, Mr. Albert Bonnheim, of Sacramento, is as follows: "It is not so much desired to obtain new facts or new truths in ethics as it is to place the truth which we now have before as many students as possible, so that they will take greater interest in questions dealing with ethical problems." The competition is open to all undergraduate students of Stanford University, and is divided into two parts:

1. *The Bonnheim Dissertations.*—The general regulations governing the competition are as follows: Each competitor must deposit with the Registrar before a fixed date in January an essay upon the subject assigned by the committee. The essays must not be signed, but should have some mark of identification and be accompanied by a sealed envelope containing the name of the author. They must be typewritten on thesis paper of regulation size. No limit of length is prescribed, but a treatment not to exceed ten thousand words is recommended. The subject announced is intended by the committee to be a general

one. It is desirable that dissertations be limited to some particular phase of the general subject. The judges will announce the names of the four competitors who present the best Bonnheim dissertations, awarding them premiums of $50 each. But no award will be made to any essay not deemed worthy of recognition.

2. *The Bonnheim Discussion.*—The winners of the Bonnheim premiums for dissertations shall be qualified to engage in the discussion, which will be upon the same subject as the dissertations, and which will be held the first week in February. The Bonnheim prize of $50 will be awarded to the speaker who in his discussion of the subject shows the clearest insight and makes the most effective presentation. Each speaker will be allowed twenty minutes.

The general subject for 1911 was "Professional Ethics." The judges of the dissertations were Dr. Harry Reynolds of Palo Alto, Mr. Alexander Sheriffs of San Jose, and Professor Guido Marx; of the discussions, Dr. Arthur William Meyer, Mr. S. W. Charles, and Professor William Dinsmore Briggs. Premiums were awarded to Albert Freeman Coyle, Edgar Clarence Smith, William Brownlee Owens, and Eugene Earl Tincher. The Bonnheim prize was won by William Brownlee Owens.

The general subject for 1912-13 is "Ethical Aspects of the Open Shop." The essays are due at the Registrar's Office, January 17. The judges will announce the Bonnheim premiums January 31, and the discussion will take place February 7.

Intercollegiate Debate

An Intercollegiate Debate, under the auspices of the Associated Students of the University of California and of the Leland Stanford Junior University, is held in November of each year. In 1911-12 the debate was held at Stanford.

The question for 1911-12 was, "Resolved, That judges should be exempt from recall." The contestants were: Louis Earle Goodman, Tracy Barrett Kittredge, Hermann Horatius Phleger, of the University of California; and Preston Leroy Higgins, William Brownlee Owens, and William Edward Simpson, of Stanford. The debate was won by the University of California.

Carnot Medal

The Carnot Medal, presented by the Baron de Coubertin, for the purpose of encouraging the study and discussion, in California, of

French history and politics, is awarded annually to the student who, in the opinion of the judges, proves himself the best debater in a contest held for the purpose between Stanford University and the University of California.

Under the rules of the contest a general subject for the debate was announced December 7, 1911, but the particular phase of the question, as embodied in a resolution, was not made known to the contestants until February 3, 1912, two hours before the time set for debate.

The general subject for 1911-12 was, "The Relation between France and Germany," and the particular question debated was, "Resolved, That in the recently reorganized French Cabinet Delcassé should have been assigned to the Ministry of Foreign Affairs." The debate was held at the University of California, February 3, 1912. The contestants were: Tracy Barrett Kittredge, Louis Earle Goodman, and Milton Marks, of the University of California; and Karl Elias Leib, Edgar Clarence Smith, and Eugene Earl Tincher, of Stanford. The judges were Rev. Albert W. Palmer, Mr. J. S. Tobin, and Judge Lucian Shaw. The medal was awarded to Milton Marks, of the University of California.

The Pacific Coast Debates

Debates with the Universities of Washington and Oregon are held on the last Friday in March of each year, under the auspices of the Pacific Coast Debating League composed of the Leland Stanford Junior University, the University of Oregon, and the University of Washington. Each institution is represented by two teams of two men each. The teams debate the affirmative and negative of the same question, which is chosen by the intercollegiate debating committees of the three institutions. The affirmative side of the question chosen debates at home, while the negative side contests at one of the other universities.

The question for 1912 was, "Resolved, That judges should be subject to recall, constitutionality granted." The contest was held March 29. At Stanford the contestants were: Glen E. Hoover and R. S. Randebush, of the University of Washington, and Eugene Earl Tincher and Arthur Edwin Worthy, of Stanford. The debate was won by Washington. At Eugene the Stanford contestants were: Carlos Cooper Close and Karl Elias Leib; and David Pickett and Leon Ray, of the University of Oregon. The debate was won by Stanford. On the same evening the remaining teams representing Oregon and

Washington debated at Seattle. The debate was won by Washington. The University of Washington was declared winner of the series.

The Edward Berwick Junior Peace Prize

Under the auspices of the California Branch of the American Peace Society, an annual prize of fifty dollars, called the Edward Berwick Junior Peace Prize, is offered for competition by students of Stanford University. The award is made to that speaker, who in a public contest, delivers the address which in the opinion of the judges is the most effective in promoting the cause of international peace. A student who has once won the peace prize is not eligible to participate again in the contest. In 1911 the contest was held on November 21, and the prize was awarded to Mr. Eugene Earl Tincher.

The James Mills Intercollegiate Peace Prize

In 1911 a prize of one hundred dollars was offered by Mr. James Mills of Riverside, to the speaker who, in a contest between representatives of the University of California and Stanford University, should deliver the most effective address in favor of international peace. The contest was held at Stanford University, December 8, 1911. The contestants were: Aubrey Wheeler Drury, of the University of California and Patterson Dana Nowell, and Eugene Earl Tincher, of Stanford. The prize was awarded to Eugeng Earl Tincher.

Essays on Total Abstinence

A prize of fifty dollars is offered annually, under the auspices of the Woman's Christian Temperance Union, to Stanford students for the best essay on Total Abstinence from Alcoholic Liquors.

Essays in competition for this prize should contain not less than two thousand and not more than three thousand words, and should be sent to the Committee on Literary Contests on or before May 1st. The particular subject proposed for the year is "The Relation of Individual Total Abstinence to National Prosperity." The award will be made by a board of judges chosen jointly by officers of the Woman's Christian Temperance Union and the Faculty Committee on Literary Contests. No award will be made if no manuscript is deemed worthy of special recognition. The winning essay is eligible for competition for a national prize of one hundred dollars, awarded to the best manuscript of those which have already won a local award.

Memorial Scholarship

The Leland Stanford Junior Scholarship, established by Mrs. Stanford, in 1900, pays the necessary expenses of its holder throughout the undergraduate course. The present holder of the scholarship is Mr. William Francis Kilcline, of San Mateo, California.

The Joseph Bonnheim Memorial Fund

April 5, 1897, Albert Bonnheim and wife, of Sacramento, California, founded the Joseph Bonnheim Memorial Fund, for the purpose of assisting worthy boys and girls to receive an education, "having in view such preparation and training, scholastic and otherwise, as will make the beneficiary self-sustaining by whatsoever trade, profession, or calling may seem best adapted for such purpose in each case." Applications for scholarships to be awarded in accordance with the provisions of this fund should be addressed to the Trustees, care of Albert Bonnheim, Secretary, Sacramento, California.

Miss Blanche Rible, '10, is a present holder of a Bonnheim Scholarship.

Harvard Club Scholarship

The Harvard Club of San Francisco maintains a scholarship for the purpose of aiding graduates of the University of California and of the Leland Stanford Junior University to pursue graduate work at Harvard University. Appointments to this scholarship, the present income of which is $500, are for one year only. Applicants should state, in writing, their college course and their purpose and plans for the future. These applications should be in the hands of the Registrar on or before March 1st. The holder of the Scholarship for the year 1911-12 is Frederick Pope Anderson, '11, of this University, studying Romanic Languages in the Graduate School.

The Rhodes Scholarships

Under the will of the late Cecil Rhodes two scholarships are assigned to each State and Territory in the United States. Each scholarship has a yearly value of $1,500, and is tenable at any college in the University of Oxford for three successive academic years.

Candidates must be unmarried, must be citizens of the United States, and must be not younger than 19 nor older than 25 on October 1 of the year in which they are elected. All scholars shall have reached, before going into residence, at least the end of their sophomore year

at some recognized degree-granting university or college. In accordance with the wish of Mr. Rhodes, the trustees desire that "in the election of a student to a scholarship, regard shall be had to (1) his literary and scholastic attainments, (2) his fondness for and success in manly outdoor sports, such as cricket, football, and the like, (3) his qualities of manhood, truth, courage, devotion to duty, sympathy for and protection of the weak, kindliness, unselfishness, and fellowship, and (4) his exhibition during school days of moral force of character, and of instincts to lead and to take an interest in his schoolmates."

Mr. Herbert Rowell Stolz, '11 is a present holder of one of the Rhodes Scholarships for California.

The next examinations for the Rhodes Scholarship will be held in October, 1912.

The Forum

The Forum, organized in 1909, is a Faculty Club for the unofficial discussion of academic questions. The following papers were presented in 1911-12:

October 27, 1911. Professor George Henry Sabine—*Intercollegiate Athletics.*

November 17. Professor George James Peirce—*A Comparison of a State and an Endowed University.*

December 13. Professor Lincoln Hutchinson, of the University of California—*An Academic By-Product.*

January 26, 1912. Professor Rufus Clarence Bentley—*The University and the High School.*

March 2. Professor Rufus Lot Green—*Standardization in Grading.*

March 22. Dr. Frederick Lester Burk, of the San Francisco State Normal School—*World-Used Knowledge versus School-Taught Scholarship.*

April 26. Professor Charles Andrews Huston—*The Improvement of Class-Room Instruction.*

Philological Association

Professor Henry Rushton Fairclough, President.

Assistant Professor William Dinsmore Briggs, Secretary.

The University Philological Association was organized September 17, 1892, for the purpose of reading and discussing results of scientific investigations in language and literature. The membership consists of the instructors and advanced students in the different

language departments in the University. The regular time of meeting is the first Thursday of each academic month, excepting September, January, and May, at 8:00 p.m. The following papers were presented during the calendar year ending April, 1912:

April 20, 1911. (1) *The Life of Theocritus*, by Professor MURRAY. (2) *The Etymology of O. F. estrumelé*, by Mr. F. P. ANDERSON.

October 12, 1911. *The Method of Self-Interpretation as Applied to Shakespeare*, by Professor NEWCOMER.

November 16, 1911. (1) *The Sources of the Sentiments of the French Academy on the Cid*, by Professor SEARLES. (2) *The Interpretation of Certain Passages in Horace, Terence, and Juvenal*, by Professor ELMORE.

February 1, 1912. (1) *Artificial Languages and Philology*, by Professor GUÉRARD. (2) *Unconsidered Trifles*, by Professor BRIGGS.

March 7, 1912. *Epic Elements in the Divine Comedy*, by Professor JOHNSTON.

SCIENCE ASSOCIATION

Professor DOUGLAS HOUGHTON CAMPBELL, President.
Associate Professor WILLIAM RANKINE ECKART, Vice-President.
Assistant Professor ISABEL MCCRACKEN, Secretary.

The Science Association was organized January 17, 1894. Original investigations and papers of general interest on scientific topics are presented from time to time.

The following papers were read before the Association between April, 1911, and April, 1912:

Assistant Professor L. L. BURLINGAME—*Evolution of Cone-Bearing Trees.*

Assistant Professor EDWIN CHAPIN STARKS—*Snapshots in Brazil.*
Associate Professor NOAH FIELDS DRAKE—*Coal-fields of China.*

Assistant Professor ERNEST CHARLES DICKSON—*Experimental Nephritis.*

Professor JOHN MAXSON STILLMAN—*Some Concepts in Chemistry.*
Professor WILLIAM OPHÜLS—*Arteriosclerosis.*
Professor RAY LYMAN WILBUR—*Relation of Drugs to Heart Beat.*

The University Conference

President—Kenneth Llewellyn Dole, '12.

Secretary—Harold Sydney Morgan, '12.

Advisory Committee—Kenneth Llewellyn Dole, '12, Maurice Timothy Dooling, '12, Karl Ludwig Schaupp, '12, Lester Douglas Summerfield, '12, Floyd Brown, '12.

Members—Arthur Warren Ambrose, '13, Dell Bernie Arrell, '12, Samuel Stillman Berry, '09, Maurice Timothy Dooling, '12, Wallace Rolland Finney, '12, Robert C. Hamilton, '12, Emil Frederic Hollman, '11, Eugene Francis Kern, '13, Garton D. Keyston, '12, William Noble Lacey, '11, Henry Lawrence Loud, '13, Merle Ellsworth Mitchell, '12, Harold Sydney Morgan, '12, John Frederick Partridge, '12, Landon McGee Robinson, '13, Thomas Sanborn, '12, Lester Douglas Summerfield, '12, Eugene Crittenden Templeton, '11, Jay R. Whittemore, '12, Marshall B. Henshaw, '12, George Bevier, '11, Roger W. Olmstead, '13, Merle W. Alderman, '11.

LELAND STANFORD JUNIOR MUSEUM

Harry C. Peterson, Curator.
Granville G. Howard, Assistant Curator.
P. J. White, Fred Ellsaesser, Stanley Ross, T. Kimura, Assistants.

In 1880, Leland Stanford, Junior, then eleven years of age, accompanied his parents on a trip through Europe, and collected numerous mementoes of the places visited. In 1883, on a second trip he began to pursue this object more ambitiously, and finally with the idea of establishing a museum. The Leland Stanford Junior Museum was designed by Mrs. Stanford as a memorial to perpetuate this idea, and the various collections are mainly her gift to the Museum.

The collection made by Leland Stanford, Junior, between 1880 and 1884, has been placed in two rooms (A and B), and in room A his own arrangement is reproduced in detail. In the room adjoining (B) are found mementoes of his early life. These two rooms contain especially Egyptian bronzes, Tanagra figurines, Greek and Roman glass, armor, mosaics, Sèvres and Dresden ware, and the like.

The Memorial Room (O) was designed to contain personal mementoes of Senator and Mrs. Stanford. The collection includes ancestral portraits of the Stanford and Lathrop families; two cases devoted to the Grant family collection; racing trophies; Muybridge's first photographs of "Animals in Motion," and subsequent works; the "Last Spike," and other historic relics of the Central Pacific Railroad; a large assortment of Point, Alençon, Chantilly, Duchesse, Honiton, Valenciennes, and other laces; India shawls, fans, Worth dresses, antique jewelry, and European souvenirs.

The vestibule and upper corridor are devoted principally to statuary, old and rare books, papers, etc., including Duc de Loubat's reproductions of Aztec and Mexican manuscripts, a 16th century illuminated Turkish Koran, Lord Kingsborough's "Antiquities of Mexico," and German engravings.

The Di Cesnola Collection (rooms C and E) contains five thousand pieces of Greek and Roman pottery and glass from the Island of Cyprus.

Room F contains a collection of Venetian glassware and chandeliers, mirrors, and mosaic art pieces, the gift of Messrs. Salviati & Camerino,

of Venice, Italy. Iridescent glass, Etruscan vases, Roman lamps, sculptured marble heads, and bas-reliefs of the first century were added by Mrs. Stanford.

The American collection (I) is made up of mound relics, Indian baskets, Acoma ware, utensils, Alaskan canoes, totem poles, etc. In this room is also a display of material of the stone age purchased by Mrs. Stanford in Denmark, as well as a collection of Samoan relics and war implements, given by President Jordan. The center case in this room contains practically all the implements extant of the old Mission Dolores, presented by Don Pablo Vasquez, whose father was the last major-domo of the Mission.

In the Chinese and Japanese room (K) there is a collection of bronzes, arms, china, lacquer, cabinets, musical instruments, rich embroideries, and specimens of wood-carving, including the Imperial bedroom set, a marvel in wood-carving and inlaid work.

The Japanese collection, purchased by Mrs. Stanford in 1902, consists of cloisonne, Satsuma, porcelain, embroideries, Buddhistic images, and ivory carvings. The large bronze Koro, over 300 years old, is especially noteworthy. The Corean collection, the gift of Mr. Timothy Hopkins, contains costumes, household goods, cabinets, screens, etc. Mr. Hopkins has also placed in the Museum a collection of ancient and modern coins and medals (Room F).

The Fine Arts Collections (rooms P, Q, R, U, and V) include pictures by Messonier, Bouvier, Bonnat, Richter, Carolus-Duran, Van Wyck, Bierstadt, Ch. Landelle, Courtois, Piot, Munier, Brozik, Ricci, Humphrey Moore, Porteilje, Bradford, E. Paoletti, Mazzoni, Keith, Hill, Charles Nahl, C. T. Wilson, and many others.

The most important collection donated to the Museum during recent years consists of eighty-five oil paintings presented by Mr. Thomas Welton Stanford of Melbourne, Australia. These pictures include rare canvasses and panels from such artists as Minderhout Hobbema, James Giles, R. S. A., John Frederick Herring, Lienur, Van der Houten, Francis Snyders, W. J. Laidley, David Bates, John Yarley, Juliun M. Price, J. W. Ready, William Melby, James E. Meadows, Elijah Walton, F. G. S.; W. Henry; W. Koek-Koek, E. Wake Cook, T. R. Miles, Sr., John Glover, Herr Schnars-Alquist, Louis Buvelot, William Hart, William Shiels, R. S. A., S. Bird, Patrick Nasmyth, Emil Bayard, Gerard Lairesse, C. Wimmer, Salvator Rosa, G. Koken, John Weenix, Bachman, Kobell, Jr., Charles Stuart, Heinrich Rasch, Melchoir Hondecooter, Marie Angelica Kaufman, Ten Kate,

George Earl, Guardabassi, and E. G. Lewis. The collection is in Room U. In addition to this large collection, Mr. Stanford previously donated a group of sixty oil paintings of Australian scenes, the work of I. W Curtis, a noted artist of Australia. Many of these are now hung in Room Q.

Room V contains the Anna Lathrop Hewes collection of paintings, statuary, mosaic, etc. Ceramics collected by Mrs. Stanford include Sèvres, Dresden, Royal Berlin, Persian, Pompador crystal, Bohemian, and numerous other wares.

Through the courtesy of Wells, Fargo & Co., all gifts intended for the Museum will be transported free of charge over their lines, in shipments of fifty pounds or less, from railroad points in California, Oregon, and Nevada, if addressed to The Curator, Leland Stanford Junior Museum, Stanford University, California.

Pending the complete restoration of the Museum building, a temporary installation of exhibits has been made in the main portion.

Museum hours: 10:00 a.m. to 5:00 p.m. except Sundays and holidays.

DEGREES CONFERRED

*September 9, 1910; †January 13, 1911; May 22, 1911.

BACHELOR OF ARTS

GREEK

Douglas Clark
Jennie Lindsay Donnelly

LATIN

Catherine Ida Birch
†Anne Elise Borough
Marcella Carmelita Duff
Pearl Blanche Fortune
Edith Florence Grundy
Stella Josephine Krause
Isabel Blake Noble
Korah Belle Wiley

GERMANIC LANGUAGES

†Edward Vere Brewer
Nellie Isabelle Duren
†Kenneth Logan Euans
†Florence Bertha Haig
Edith Hayden
†Myrtle Hodge James
Norma Grace Keller
†Edith Louise Kelly
†Isabel Tura Low
*Ruth Evalina Maddox
Irene Mersereau
Florence Prior Metzner
Alma Pixley
Julia Irene Roll
Alice Eliza Westwick

ROMANIC LANGUAGES

Frederick Pope Anderson
†Mabel Gertrude Bowler
†Sadie Dernham
Marguerite Regina Knox
Maude Anita Miller
Helen Monroe
Estelle Caswell Porter
Helen White

ENGLISH

Anais Julia Allen
†Florence Elizabeth Allen
Elsa Margaret Bille
Bruce Ormsby Bliven
†Gertrude Gardner Brainerd
Anna Catherine Burns
†Marion Vroom Carson
Harlan Silcott Don Carlos
Lillian Susan Dunlap
Adele Ehrenberg
Helen Elizabeth Ely
Natalie Bourgeois Feraud
Helen Van de Water Fowle
Helen Geohegan
Cornelia Alberta Hanna
*Howard George Hanvey

Mildred Mary Hayes
Ida Rickard Hayward
Jennie Alice Heartt
Mabel Clare Hermans
Frank Ernest Hill
†Jessie Rua Kistler
Frances Lynette Legge
†Eda Lillian Long
Dorothy Grotecloss Marx
Bessie Jane Mayne
Sarah Matilda Mills
Como Montgomery
Edith Therese Morgan
Marguerite Eugenia Pratt
Hazel Kimball Reed
Jane Elinor Reene
James Gamble Reighard
Carolyn Beatrice Scull
Carol Somerville
†Russell Osborne Stidston
†Genevieve Morton Tully
Mamie Etta Wood

PHILOSOPHY

Herbert Ernest Dennis
Marion Louise Horton
Florence Miriam Woodhead

PSYCHOLOGY

Elizabeth Frances Lanktree

EDUCATION

Jessie Lee Andrews
Virgil Ray Belieu
†Arthur M. Croop
†John Sherman Gifford
Anna Nason Guthrie
Bessie Heath
Emil Frederic Hollmann
†John David Houser
†Herbert Edward Knollin
†Susan Marie Looney

HISTORY

†Maybelle Bertha Barlow
†Gladys Wolcott Barnes
Lucile Baugh
†Linda May Bell
Helen Darby Webster Campbell
Edna Ellita Clark
Emily Lee Coffin
Mary Elizabeth Gunnell
Katharine Gertrude Hanley
Jessie Ray Hanna
Elmer Louis Hertel
Marie Herbert Jackson
†Hazel May Johnston
Marguerite Ednah Kauffman
†Emma Ellen Kuno
Beatrice McHenry
Anita Jean McLachlan
†Winnefred Millspaugh
Helen Winifred Piggott
Susie Mae Rasmussen
Elizabeth Tully Rea
Getrude Louise Scudder
†Marjory Seeley

ECONOMICS AND SOCIAL SCIENCE

Bertrand Logan Ball
Earl Lott Banta
George Washington Greene Carpenter
Philip West Dickson
Earle Forsyth Farnsworth
Daisy Marion Gleason
†Angus Johnston, Jr.
†Joe Paul Levy
Kazumaru Mochizuki
†George David Morrison
†John Walter Roberts
Alfred Loveday Rockwood
†John A. Stahl
Theodore Krueger Stark
Emeline Adelaide Swift
Kenneth Van Slyck

PRE-LEGAL CURRICULUM

*Adolphus Benjamin Bianchi
†Warren Cross Conrad, Jr.
George Armand Ditz
†Arthur Homer Drew
†Roy James Glendenning
†Raymond Arthur Gott
†Howard Irving Hadley
Arthur Elton Hamilton
George Juan Hatfield
Walter Emil Hettman
Frank Howard Hilton
Grant Holcomb
George Erwin La Grange
†Hale McCowen, Jr.
Edward Lawrence McKeown
Frank Jewell Macomber, Jr.
Edwin Clark Matthias
Robert Justin Miller
Ignatius Martin Peckham
Edmund Wright Pugh
†Harry Ellsworth Smith
†Joel Douglas Thomison
Howard Sloane Tracy
†Ben Watkins Utter
†Earl Seeley Wakeman
Chester Harvey Warlow
Carl Crumbie Wheaton
Herbert Eustace White
Robert Woodville

GRAPHIC ART

†Gladys Willamary Clark
Georgie Saunders Hardy
Grace Katherine Heflinger
†Elizabeth Hargest Ogier
Harriet Park
Chassie Francis Reed
†Hermann Rosse

MATHEMATICS

Adeline Hocking
Ida Louise Specht
Mary Virginia Stuart
Franklin Fowler Wolff

PHYSICS

Helen Elizabeth High
Bertha Lydia Warthorst

CHEMISTRY

Leonore Louise Biethan
George Shambaugh Bohart
Thomas Meredith Cramer
Robert John Cross
Louis Dunshee Elliott
Charles Merrill Fulkerson
Harold Pratt Knight
William Noble Lacey
Helen May Nagel
William Edward Perdew
Ralph Edward Sanborn
Harry Johnson Sears
Albert Huntington Wells

BOTANY

William Launcelot Scofield
Edith Amelia Wilkins
†Florence Williams

PHYSIOLOGY AND HISTOLOGY

*Tholow Binkley
Lotta Lee Bland
†Emmett James Brady
Roy Edwin Fallas
Alice Mabel Jenkins
Jean Redman Oliver
Russell Paine
Alfred L. Camille Siefert
Herbert Rowell Stolz
†Georgia Emily Thompson

ZOOLOGY

Mabel Case
Grace Clare Steinbeck
William Francis Thompson
†Lora Mae Woodhead

ENTOMOLOGY

Erval Jackson Newcomer
†Cyril E. Pemberton
Camille Madge Pruett
Frankie Willard

GEOLOGY AND MINING

Elwin James Boundey
Welton Joseph Crook
Thomas Woodruff Halliday
*Joseph Stanley Hook
Knight Starr Jordan
†Horace Mann
*John Henry Menke, Jr.
*Floyd Calhoun Merritt
*Howard Frank Nash
Henry Jessup Packard
Benjamin Everett Parsons
Horatio Leverett Small
*Eugene Crittenden Templeton
Clarence Almon Waring
Frank Luqueer Wilde
Hayes Wilson Young

CIVIL ENGINEERING

Frank Van Acker
Charles Frederick Akins
Santaro Arakawa
Robert Bruce Ball
Clarence Earl Blee
Oral William Borland
Edward Elias Boudinot
†Roger Houssels Brown
Hong-Sung Chuck
†David Paul Crawford
George William Davis
Walter Elliot
Carl Field Ganong
†Harry Leonard Horton
Leon David Howland
Robert Harold Jesson
Paul Frank H. Lada
Latham Eastman McDougal
W. Bruce McMillan
Jesse Robert McWethy
Roland Grotecloss Marx
Samuel Brooks Morris
†Frederick Hartman Oliver
Maurice Giesy Parsons
James Henry Polhemus
Harvest Richard Ramsdell
Royal Upson St. John
Harrison Smitherum
Arthur E. Smothers
Harold Houser Soult
Clyde Arthur Swigart
Nelson Taylor
William Henry Thomas
Benjamin Franklin Wade
Charles Glenn Walker
James Bertrand Wells
Robert C. Westwick
John Henry Wiggins
Clarence John Ramsey Wilson

MECHANICAL ENGINEERING

Carl Henry Benson
†John Boulware Bubb
Albert Allen Coddington
Ernest Leland Ford
John Edward Hanny
Wallace Chamberlain Mills
Yoshi Murakami
Crighton Welch Scholefield

ELECTRICAL ENGINEERING

Carlo Prestbye Christensen
Earle Adair Crellin
Robert Parke Foote
James Rowland Johnson
Clarence Milton LeCount
Jacob Howard Leeds
Eugene Garrison McCann
Leroy Coon Nimmo
Thomas William Snell
Charles Harold Tallant
Elbert Cecil Woodcock
Roy Neill Wooster

MASTER OF ARTS

GREEK

Blanch Ribble, A. B.

LATIN

Donella Mary Cross, A. B.
Katharine Lummis, A. B.
Abigail Frances McKee, A. B.
Emily Hannah Radcliffe, A. B.
Iva Thomas, A. B.
John James Van Nostrand, Jr., A. B. (Chicago)
Ethel Buell Virtue, A. B. (Wisconsin)
Phebe Anna White, A. B. (Kingfisher College)

GERMANIC LANGUAGES

†Mary Acheson, A. B. (Royal University of Ireland)
Florence Mildred Bowes, A. B. (Pomona)
Lillie Belle Eygabroad, A. B. (Pomona)

ROMANIC LANGUAGES

Henry Haxo, A. B.

ENGLISH

Lillard Ray Bond, A. B. (Occidental)
Blanche K. Freeman, A. B. (Indiana)
Marcia Brucker Lever, A. B.
Sade Oppenheimer, A. B.
Elizabeth Thompson, A. B.

EDUCATION

*Noah S. Yoder, A. B.
Hubert Guy Childs, B. S. (Minnesota)
Edward Samuel Evenden, A. B.
Arthur Heche, A. B.
John Wesley Raymer, B. S., M. S. (Wisconsin)
Lulu Adnimra Sours, A. B.

HISTORY

Jesse Loring Cook, A. B.
Grace Maple Davis, A. B.
Robert Luther Duffus, A. B.
Ruth Edna Robertson, A. B.

ECONOMICS AND SOCIAL SCIENCE

Samuel Bryan, A. B.
Alice Edna Walker, A. B.

PHYSICS

Eulalia Richardson, A. B.

CHEMISTRY

Thomas Buck Hine, A. B.
Arthur Henry Myer, A. B.
Benjamin Dey Shoemaker, A. B.

BOTANY

Lucy Youse, A. B. (Indiana)

PHYSIOLOGY AND HISTOLOGY

Nell Elizabeth Ford, A. B.

ZOOLOGY

†Frank Walter Weymouth, A. B.

ENTOMOLOGY

Georgina Evelyn Hadden, A. B.
David Timmins Fullaway, A. B.

ENGINEER

METALLURGY

Luther William Bahney

MINING

Charles Alfred Randall, A. B.
Alvin Theodore Schwennesen, A. B.

CIVIL ENGINEERING

Ralph Leon Hughes, A. B.

MECHANICAL ENGINEERING

Harry Harmon Blee, A. B.

CHEMISTRY

Paul Herman Waldraff, A. B.

JURIS DOCTOR

Clarence Coonan, A. B.
†Fred William Crawford, A. B.
Robert Emmet Fitzgerald, A. B.
Henrie Granville Hill, A. B.
Marion Rice Kirkwood, A. B.
Lynn Meade Laney, B. L. (California)
Preston Shepard Lincoln, B. S., LL. B. (New York)
Hale McCowen, Jr., A. B.
William Henry Masters, A. B.
Marcus Martin Matthiessen, A. B. (Harvard)
Harry Lawrence Price, A. B.
Girard Nye Richardson, A. B.
Walter Slack, A. B.
Lafayette John Smallpage, A. B.

DOCTOR OF PHILOSOPHY

PHYSICS

Albert Edward Caswell, A. B.
George Francis McEwen, A. B.
Perley Ason Ross, A. B., A. M.

CHEMISTRY

Fred Finley Fitzgerald, A. B., A. M.

DIRECTORY OF OFFICERS AND STUDENTS

BOARD OF TRUSTEES

Timothy Hopkins, President,
(812 Nevada Bank Bldg., S. F.), Menlo Park
Charles P. Eells, A. B., Vice-President,
2415 Pierce St., San Francisco
Charles Gardner Lathrop, Treasurer and Business Manager,
Stanford University
Vanderlynn Stow, A. B., Assistant Treasurer,
2900 Broadway, San Francisco
Horace Davis, LL.D., 1800 Broadway, San Francisco
George Edward Gray, 2945 Magnolia St., Berkeley
Samuel Franklin Leib, LL.B., First National Bank Bldg., San Jose
Joseph Donohoe Grant, A. B., 2200 Broadway, San Francisco
Leon Sloss, 310 Sansome St., San Francisco
Frank Miller, 28 Hillcrest Rd., Berkeley
Thomas Welton Stanford, 142 Russell St., Melbourne, Australia
George Edward Crothers, A. M., Chronicle Bldg., San Francisco
Whitelaw Reid, A. M., LL. D.,
The American Embassy, London, England
William Babcock, San Rafael
James Leroy Nickel, Merchants Exchange Bldg., San Francisco

William E. Caldwell, A. B., Secretary of Board of Trustees,
510-512 Nevada Bank Bldg., San Francisco

STANDING COMMITTEES OF THE TRUSTEES

Finance: Sloss, Lathrop, Stow, Leib, Miller, Nickel.
University: Davis, Eells, Grant, Babcock, Crothers.
Library: Eells, Davis, Stow, Stanford, Reid.
Rules: Davis, Leib, Miller, Crothers.
Museum: Lathrop, Grant, Babcock, Gray, Stanford.
Memorial Church: Lathrop, Sloss, Leib, Reid, Gray.

THE UNIVERSITY

[Office and office hours in parentheses; M T W Th F unless otherwise specified]

President: David Starr Jordan. (111, 11-12, 2-3.)

Vice-President: John Casper Branner. (332, 8-12, 2-5.)

Registrar: Orrin Leslie Elliott. (117, 8:15-12:15, 1:30-4:30, S 9-12.)

Librarian: George Thomas Clark. (Library, 8:30-12:30, 1:30-4:30.)

Academic Secretary: George Archibald Clark. (112, 8-12, 3-5.)

Dean of Women: Evelyn Wight Allan. (203, MWF 1:30-3:30, Th 4-6 at 31 Salvatierra.)

Student Adviser: Almon Edward Roth. (265, TTh 11:15-12-15, MTWThF 1:30-3:30.)

Chaplain: David Charles Gardner. (Vestry, TWThF 9-12.)

Appointment Secretary: Susan Brown Bristol. (118, 9-12, 1:30-4:30.)

Medical Adviser for Women: Clelia Duel Mosher. (94, 1:30-2:30.)

THE DEPARTMENTS

[(1) Executive Head; (2) Secretary of Department Faculty]

Greek: Augustus Taber Murray.

Latin: Henry Rushton Fairclough; Benjamin Oliver Foster.

Germanic Languages: George Hempl; James Owen Griffin.

Romanic Languages: Oliver Martin Johnston*; Clifford Gilmore Allen.

English Literature and Rhetoric: Alphonso Gerald Newcomer; William Dinsmore Briggs.

English Philology: Ewald Flügel.

Philosophy: Henry Waldgrave Stuart.

Psychology: Frank Angell.

Education: Ellwood Patterson Cubberley.

History: Ephraim Douglass Adams; Percy Alvin Martin.

Economics and Social Science: Alvin Saunders Johnson; Ira Brown Cross.

Law: Frederic Campbell Woodward; Charles Andrews Huston.

Graphic Art: Arthur Bridgman Clark*; Robert Bartholow Harshe.

Mathematics: Robert Edgar Allardice; Hans Frederik Blichfeldt.

Applied Mathematics: Leander Miller Hoskins.

Physics: Fernando Sanford; Perley Ason Ross.

*Acting.

Chemistry: John Maxson Stillman; William Henry Sloan.

Botany: Douglas Houghton Campbell; George James Peirce.

Physiology and Histology: Oliver Peebles Jenkins; Clara S. Stoltenberg.

Zoology: Charles Henry Gilbert; John Otterbein Snyder.

Entomology and Bionomics: Vernon Lyman Kellogg.

Geology and Mining: John Casper Branner.

Civil Engineering: Charles David Marx; Charles Benjamin Wing.

Mechanical Engineering: William Frederick Durand; William Rankine Eckart.

Electrical Engineering: Samuel Barclay Charters, Jr.*

Medicine: Ray Lyman Wilbur; William Ophüls.

Anatomy: Arthur William Meyer.
Bacteriology: Hans Zinsser.
Chemistry: John Maxson Stillman.
Medicine: Ray Lyman Wilbur.
Obstetrics and Gynecology: Henry Gibbons, Jr.
Pathology: William Ophuls.
Pharmacology: Albert Cornelius Crawford.
Physiology: Oliver Peebles Jenkins.
Surgery: Stanley Stillman.

STANDING COMMITTEES OF THE ACADEMIC COUNCIL

Advisory Board

Durand, Gilbert, Hoskins, Kellogg, C. D. Marx, Newcomer, Sanford (Secretary), Stillman (Chairman), Woodward.

Administrative Committees

1. **Student Affairs:** A. B. Clark, Elliott, Fish, E. W. Martin, Snyder.
2. **Athletics:** Angell, Long, Millis, Searles, Wing.
3. **Public Exercises:** Treat, Bassett, Johnson, Krehbiel, Peirce.
4. **Literary Contests:** Bassett, Allen, Foster, Huston, Treat.
5. **Public Health:** Zinsser, Gilbert, Long, Mitchell, Stoltenberg.
6. **Delinquent Scholarship:** Gilbert, Elliott, Hoskins, Murray, Whitaker, Woodward.
7. **Public Entertainments:** S. W. Young, C. D. Marx, G. H. Marx, Peirce, Searles.

*Acting.

Academic Committees

1. **Executive Committee:** Branner, Elliott, Foster, Green, Heath, Jordan, G. H. Marx, Meyer, Murray, Swain, Whitaker, Wing, Woodward.
2. **Admission and Advanced Standing:** Elliott, Bentley, Searles, Show, Swain.
3. **Registration:** Elliott, Moreno, Rendtorff, F. J. Rogers, Stoltenberg.
4. **Graduation:** Elliott, Abrams, Jenkins, Johnston, E. W. Martin.
5. **Schedule and Examinations:** Elliott, Brown, Elmore, Huston, McFarland.
6. **Graduate Study:** Adams, Angell, Durand, Fairclough, Hempl, Hoskins, Kellogg, Meyer, Millis, Peirce, Stillman.
7. **Library:** Sanford, Durand, Gilbert, Murray, Show.
8. **University Publications:** Kellogg, Fairclough, Jenkins, L. J. Martin, Stuart.
9. **Recommendation of Teachers:** Bentley, Cooper, Cubberley, Drew, Elliott.

OFFICERS OF INSTRUCTION AND ADMINISTRATION

[Name; title; telephone; office; office hour; residence; post-office. Post-office in all cases *Stanford University* except where university residence is followed by initial letter of town ('P' indicates *Palo Alto* post-office; 'Mayfield, M,' *Mayfield* post-office; etc.). Street address *Palo Alto* or *Campus* unless otherwise named.

'Daily' does not include Saturday. Office hours are MTWThF unless otherwise noted. Brackets indicate 'absent on leave'; the dagger (†) marks the names of men who are married.]

The superior number [1] indicates first semester; [2] indicates second semester.

†Abrams, Leroy, Associate Professor Botany, Local 127
(465, TTh 11:15) 23 Salvatierra

†Adams, Ephraim Douglass, Professor History, Local 58
(230, TTh 11:15-11:45, W 2-2:30) 9 Alvarado

Addis, Thomas, Assistant Professor Medicine, West 8385
2318 Clay, S. F.-S

Allan, Evelyn Wight, Dean of Women, Local 56
(203, MWF 1:30-3:30, Th 4-6 at 31 Salvatierra) 31 Salvatierra

Allardice, Robert Edgar, Professor Mathematics, Local 36
(70, 10:15-11:15) 19 Salvatierra

Allen, Clifford Gilmore, Assist. Professor Romanic Lang. Local 46
(242, MWF 10:15, TTh 11:15) 19 Alvarado

†Anderson, Melville Best, Professor English Literature, Emeritus
Menlo Park

†Angell, Frank, Professor of Psychology, P. A. 87
(399, TTh 2-3) 1200 Bryant

[†Barkan, Adolph, Prof. Eye, Ear, and Larynx, Emeritus, Douglas 1926]
(135 Stockton St., 9-12) 135 Stockton, S. F.

†Bassett, Lee Emerson, Assistant Professor English, Local 80
(212, MWF 11:15) 9 Cabrillo

†Bentley, Rufus Clarence, Associate Professor Education, Local 61
(52) 12 Alvarado

Berger, Alice Ruth, Acting Instructor Chemistry, Local 116
(24, 1:30-4:30) 73 No. 6th, S. J. S.

†Bingham, Joseph Walter, Associate Professor Law, P. A. 449 X
(6, TWThF 11:30-12:30) 334 Lincoln-P

†Blaisdell, Frank Ellsworth, Assist. Prof. Applied Anat. Pacific 3482
(Sacramento and Webster, 9-4) 4541 California, S. F.-S
[1]Blee, Harry Harmon, Instructor Mechanical Engineering, Local 3
(509, MWF 8:15-12:15) 4 Salvatierra
Blichfeldt, Hans Frederik, Associate Professor Mathematics,
(74, TTh 10:15-11-15) College Terrace
[2]Boardman, Walter W., Clinical Instructor Medicine, West 6193
(Lane Hosp., 9-4) Clay and Webster, S. F. S.
Boezinger, Bruno, Assistant Professor German, P. A. 196
(32, MW 9:15) 176 Bryant-P
†Bohart, George Shambaugh, Instructor Chemistry,
(28, 2-4) 856 Middlefield-P
†Branner, John Casper, Vice-President and Professor Geology, Local 10
(332, 8-12, 2-5) 13 Alvarado
†Briggs, William Dinsmore, Assistant Professor English,
(207b, MW 11) 943 Bryant-P
Bristol, Susan Brown, Appointment Secretary, 709 X
(118, 9-12, 1:30-4:30) 1155 Ramona
†Brooks, Van Wyck, Instructor English,
(208, TTh 9:15-10:15) 1327 Byron-P
†Brown, Joseph Grant, Assistant Professor Physics, P. A. 267
(385) 1013 Ramona-P
Buckingham, Elizabeth Lee, Acting Instructor English, P. A. 404K
(211, MWF 11:15 609 Kingsley P
Buehrer, Godfrey Carl, Organist, Local 130
(84 and 68) 11 Alvarado
Burbank, Luther, Lecturer Bionomics, Santa Rosa-S
†Burlingame, Leonas Lancelot, Assistant Professor Botany, Local 144
(469, W 1:30-3:30) 20 Alvarado
Campbell, Douglas Houghton, Professor Botany, Local 36
(468) 19 Salvatierra
†Cannon, Henry Lewin, Assistant Professor History, Local 46
(230, 9:15) 19 Alvarado
†Cathcart, Arthur Martin, Professor Law, P. A. 197
(7, MWTh 2:45-3:30) 1001 Ramona-P
†Charters, Samuel Barclay, Jr., Assist. Prof. Elec. Eng., P. A. 504 L
(505, 2-4) 939 Cowper
†Cheney, William Fitch, Clinical Prof. Medicine, Pacific 2573
(Shreve Bldg., 2-4) 33 Spruce, S. F.-S
†Clark, Arthur Bridgman, Associate Professor Graphic Art, Local 23
(314, MTWThF 4:30-5) 4 Cabrillo

†Clark, George Archibald, Academic Secretary, Local 24
(91, 8-12, 3-5) 7 Alvarado
†Clark, George Thomas, Librarian, P. A. 1440-R3
(Library, 8:30-12:30, 1:30-4:30) Menlo Heights
†Clevenger, Galen Howell, Associate Professor Metallurgy, P. A. 809
(560, 2-4) 381 Hawthorne-P
†Cooper, William Alpha, Associate Professor German, Local 66
(35, 11:15) 35 Salvatierra
†Crawford, Albert Cornelius, Professor Pharmacology,
(Museum, 8:15-12:15) 523 Webster
†Cross, Charles Norman, Instructor Mech. Engineering P. A. 525 K
(504, 2-5) 340 Embarcadero-P
†Cross, Ira Brown, Instructor Economics, P. A. 569 X
(219, MWF 10:15-11:15) 364 Kingsley-P
†Cubberley, Ellwood Patterson, Professor Education, Local 19
(51, TTh 12:15-12:30, W 3-3:30) 12 Cabrillo
†Cutter, Lawrence Edminster, Instructor Mechanical Engineering,
(274, MT 1:30-4:30, TTh 8:15-12:15) 627 Webster-P
Dailey, Morris Elmer, Lecturer Education, San Jose 237
San Jose-S
†Davidson, Percy Erwin, Associate Professor Education, P. A. 1440-R1
(53, TTh 10:15) University Park
Dickson, Ernest Charles, Assistant Professor Pathology, West 6193 S. F.
(Lane Hospital) 2699 California, S. F.-S
†Doane, Rennie Wilbur, Assistant Professor Entomology,
(434, 8:15-12:15) 527 Homer-P
†Drake, Noah Fields, Associate Professor Geology, Local 159
(340, 9-12, 2-5) 2 Salvatierra
†Drew, Elmer Reginald, Assistant Professor Physics, P. A. 362
(384, MWF 11:15-12) 1321 Waverley-P
†Durand, William Frederick, Professor Mech. Engineering, Local 76
(160, 11:15-12:15) 2 San Juan
Eaves, James, Instructor Surgery, Lane Hospital, S. F.-S
†Eckart, William Rankine, Jr., Assoc. Prof. Mech. Eng'r., P. A. 231K
(503, 1-4:30) 1445 Bryant-P
†Elliott, Orrin Leslie, Registrar, Local 45
(117, 9-12, 2-4:30, S 9-12) 5 Cabrillo
†Elmore, Jefferson, Associate Professor Latin, P. A. 251
(22, MWF 9:15-10:15) 1134 Emerson-P
†Espinosa, Aurelio Macedonio, Assist. Professor Romanic Languages,
(245, T 11:30-12) 543 Middlefield

†Fairclough, Henry Rushton, Professor Latin, Local 52
(22, MWF 11:15, TTh 12:15) 6 Alvarado
†Fish, John Charles Lounsbury, Professor Railroad Eng'r., P. A. 308
269, M 1:30-4:30, TTh 10:15) 1101 Emerson
Fisher, Walter Kenrick, Assistant Professor Zoology,
(441, 1:30-4:30) 1525 Waverley-P
[2]Fleischner, Charles T., Clinical Instructor Medicine, 350 Post, S. F. S.
†Flügel, Ewald, Professor English Philology, P. A. 568 K
(212, MTTh 1:30) 1153 Cowper
†Folsom, David Morrill, Associate Professor Mining, P. A. 429
(337, 11:15-12, 2-4) 320 Embarcadero-P
†Foss, John Harrison, Instructor Civil Engineering,
(269, WThF 11:15) 237 Alma-P
†Foster, Benjamin Oliver, Assistant Professor Latin,
(22, M W F 9:15) 3 Salvatierra
[†Franklin, Edward Curtis, Professor Chemistry, Washington, D. C.]
†Gardner, David Charles, Chaplain, Local 68
(Vestry, TWThF 9-12) 1a Alvarado
*Gibbons, Henry, Jr., Professor Obstetrics, Emeritus, Douglas 2222
350 Post, San Francisco-S
†Gilbert, Charles Henry, Professor Zoology, P. A. 258
(433, TTh 1:30-2:30) 433 Melville
[1]†Goodwin, John Edward, Assistant Librarian, Local 63
(Library, 8-12, 1-4) 11 Alvarado
Grass, Donald Frederick, Acting Instructor Economics, P. A. 5184
318 Lincoln P
†Gray, Henry David, Assistant Professor English, P. A. 298 K
(209, MWF 11:15) 915 Channing-P
†Green, Rufus Lot, Professor Mathematics, Local 108
(71, 11:15-12:15) 13 Salvatierra
†Griffin, James Owen, Professor of German, Local 54
(35, 10:15-10:30) 14 Alvarado
†Guérard, Albert Léon, Assistant Professor Rom. Lang. Local 117
(245, W 9:15-10:15) 37 Salvatierra
†Hall, Howard Judson, Assistant Professor English, P. A. 700
(206, M 2:30, TTh 11:15.) 209 Addison-P
†Harcourt, Robert Henry, Instructor Mechanical Engineering,
(Forge, 8:15-12:15, 1:30-4:30) 559 Everett-P
[†Harshe, Robert Bartholow, Assistant Professor Graphic Art,
In Europe]

*Died September 27, 1911.

Hauschild, George William, Assistant Professor German, Local 21
(32, Th 10:15-11:15) Mayfield
Hays, Alice Newman, Assistant Library, Classifier, Local 57
3 Alvarado
†Heath, Harold, Professor Zoology, P. A. 557 L
(436, MTThF 1:30-4) 1147 Ramona-P
†Hempl, George, Professor Germanic Philology, Local 101
(32, MWF 9:15, Th 2:30) 8 Cabrillo
†Hilmer, Hermann Johann, Instructor German,
(35, 11:15) 151 Cowper-P
†Hirschfelder, Joseph Oakland, Prof. Clinical Med., West 757
(275 Post, S. F., 2-5) 1392 Geary, S. F. S.
[Hohfeld, Wesley Newcomb, Professor Law 625 Forest-P]
†Hoskins, Leander Miller, Professor Applied Mathematics, P. A. 75
(275, 11:15-12:15) 365 Lincoln-P
†Howard, Burt Estes, Professor Political Science, Local 41
(223, MWF 11:15) 12 Dolores
[†Huberich, Charles Henry, Professor Law, In Europe]
†Huston, Charles Andrews, Professor Law, P. A. 782 X
(4, MTWTh 2-2:30) 1048 Ramona-P
James, Frances Sophia, Assistant Library, Park 2197, S. F.
(Sac. and Webster, S. F., 8:45-12, 1-5:30) 731 Buena Vista, S. F.-S
†Jenkins, Oliver Peebles, Professor Physiology and Hist., Local 40
(482) 3 Lasuen
†Johnson, Alvin Saunders, Professor Economics, P. A. 566
(222, MWF 10:15-11:15) 151 Embarcadero-P
†Johnston, Oliver Martin, Assoc. Professor Romanic Lang., Local 103
(242, MTWTh 2:30, TTh 3:30) 4 Alvarado
†Jordan, David Starr, President, Local 1
(111, 11-12, 2-3) Xazmin Hs., Serra Ave.
[†Kellogg, Vernon Lyman, Professor Entomology, In Europe]
Knowlton, Philip Arnold, Instructor Latin, Local 21
(22, W 10:15) 20 Lasuen
Koontz, John Andrew, Jr., Instructor Electrical Engineering, 366 K
(507, MTWTh 1:30-4:30) 221 Bryant-P
†Krehbiel, Edward Benjamin, Associate Professor History, Local 129
(2:30, TTh 10:15.) 29 Salvatierra
*Larkin, Manuel Lippitt, Acting Instructor Economics, Local 63
(220, MWF 8:15-9:15) 11 Alvarado
†Lenox, Lionel Remond, Professor Analytical Chemistry, Main 471
(40, 2-4) Mountain View

†Lesley, Everett Parker, Assistant Professor Mech. Eng., Local 31
(266, 9:15) 22 Alvarado
†Liggett, James Bennett, Instructor Foundry Practice,
(540, 8:15-12:15, 1:30-4:30, S 8:15-9:15) 445 Forest-P
†Long, Royce Reed, Assistant Professor Physical Training, Local 109
(Encina Gymnasium, M W F 11:15, 5-6; T Th 5-6) 11 Salvatierra
McCann, Eugene Garrison, Acting Instructor Elec. Eng., Local 13
159 Encina
McCracken, Mary Isabel, Assistant Professor Entomology,
(433, 8:30-12:15) 5 Salvatierra
†McDowell, John Ezra, Assistant Registrar, Local 44
(120, 8:15-12:15, 1:30-4:30) 10 Cabrillo
†McFarland, Frank Mace, Professor Histology,
(480, TTh 9:15-12:15, MTW 1:30-4:30) 943 Scott-P
†McMurphy, James Ira Wilson, Acting Instructor Systematic Botany,
(429, TWTh 1:30-4) 341 Columbia St., College Terrace
†Maloney, Henry Wilfred, Instructor Physical Training, P. A. 696
(Encina Gymnasium, 10-12, 4-6) 176 Waverley
†Manning, William Albert, Assistant Professor Applied Mathematics,
(45, MWF 11:15) 453 Melville
†Martin, Ernest Whitney, Associate Professor Greek, P. A. 132
(25, TTh 11:15) 525 Lincoln-P
[Martin, Lillien Jane, Professor Psychology, In Europe]
Martin, Percy Alvin, Instructor European History, Local 31
(230, T 2-2:30, F 9:15-9:45) 22 Alvarado
†Marx, Charles David, Professor Civil Engineering, P. A. 255
(271, 8:15-9:15) 357 Kingsley
†Marx, Guido Hugo, Professor Mechanical Engineering, P. A. 715
(274, 9:15) 356 Lincoln
†Meyer, Arthur William, Professor Anatomy, P. A. 413 K
(Museum, MWF 11-11:30) 1116 Ramona-P
†Millis, Harry Alvin, Associate Professor Economics, P. A. 497 X
(221, MWF 10-10:25) 471 Addison-P
Mirrielees, Edith R., Instructor English,
(209a, T 3-4, Th 11:15-12:30) 15 Salvatierra
†Mitchell, John Pearce, Assistant Professor Chemistry, P. A. 722
(10c, 2-4) 235 Embarcadero
Moreno, Halcott Cadwalader, Associate Professor Applied Mathematics,
(40, 11:15-11:30) 1235 Webster
†Moser, Charles, Instructor Civil Engineering, P. A. 690 X
(500, MWF 10:15) 651 Homer-P

Mosher, Clelia Duel, Medical Adviser to Women;
Director Roble Gymnasium, P. A. 23
(94, 1:30-2:30) 1094 Emerson-P
†Murray, Augustus Taber, Professor Greek, P. A. 481 Y
(25, MWF 9:15-10:15) 1019 Bryant
†Newcomer, Alphonso Gerald, Professor English, P. A. 517 K
(209, M 4:40, TTh 10:15) 1015 Forest Court-P
Nielson, Axel, Instructor Electrical Engineering,
(506, TWTh 9:15-11:15) 928 Waverley-P
†Ophüls, William, Professor Pathology, West 6801
(Clay and Webster, San Francisco) 114 Walnut, S. F.-S
†Palmateer, Theron J., Instructor Machine Shop,
(8:15-4:30) Mayfield-M
Partridge, John Slater, Lecturer in Law, Kearny 988
Flood Bldg., San Francisco-S
†Peirce, George James, Professor Bot. and Plant Phyl., P. A. 436 X
(466, W 3:30) 281 Embarcadero
Pellissier, Robert Edouard, Instructor in French, Local 46
(245, MW 9:15, Th 8:15) 19 Alvarado
†Ponzer, Ernest William, Assistant Professor Applied Mathematics,
(40, 10:15-11:15) 188 Bryant-P
Poor, Henry Varnum, Instructor Graphic Art, Local 13
(314, 1:30-4:30) 159 Encina
Porter, Langley, Clinical Professor Medicine,
Post, Margaret A., Assistant to Registrar, P. A. 836
(119, 8:15-12:15, 1:30-4:30) 1112 Ramona-P
†Price, George Clinton, Professor Zoology, Local 53
(446) 5 Alvarado
†Rendtorff, Karl Gustav, Associate Professor German, P. A. 434X
(32, M 10:30, W 4:30) 1130 Bryant-P
†Rixford, Emmet, Professor Surgery, Franklin 5100
(1795 California, 1-3) 1795 California, S. F.-S
†Robinson, Edgar Eugene, Assistant Professor History, P. A. 718Y
(MF 10:15-10:45, Th 2-2:30) 521 Addison-P
†Rogers, Austin Flint, Associate Professor Mineralogy, P. A. 652 Y
(362, TWThF 10:15) 1047 Ramona-P
†Rogers, Frederick John, Associate Professor Physics, Local 34
(381) 4 Lasuen
†Ross, Perley Ason, Instructor Physics,
(387) 209 Hanover, College Terrace

Rossiter, Maida, Assistant Library, Reference Librarian, Local 14
15 Lasuen

Roth, Almon Edward, Student Adviser, Local 13
(265, TTh 11:15-12:15, MTWThF 1:30-3:30) 105 Encina

Russell, Theresa Peet, Instructor English, P. A. 404K
(206, TTh 8:15-9:15, 1:30-2:30) 609 Kingsley-P

[†Ryan, Harris Joseph, Professor Electrical Engineering, La Jolla]

†Sabine, George Holland, Assistant Professor Philosophy, Local 55
(417, M 8:45-9:15, Th 9-10) 9 Salvatierra

†Sanford, Fernando, Professor Physics, P. A. 646
(382) 450 Kingsley

†Searles, Colbert, Associate Professor Romanic Languages, Local 63
(245, MWF 11:15, TTh 10:15) 11 Alvarado

Sears, Harry Johnson, Instructor Chemistry,
(5c, 1:30-4:30) 415 Lytton-P

†Sears, Jesse Brundage, Instructor Education, P. A. 540 L
(52, M W F 10:15) 627 Gilman

Seward, Samuel Swayze, Jr., Assist. Prof. English, Franklin 975
(208, T 10:15, 3:30, Th 9:15) 1032 Vallejo, S. F.-S

†Show, Arley Barthlow, Professor European History,
(230, MWF 10:15-11) College Terrace

[†Skinner, Macy Millmore, Assistant Professor German, In Europe]

†Sloan, William Henry, Instructor Chemistry,
(49c, 1:30-4:30) Alta Mesa-P

†Slonaker, James Rollin, Assistant Professor Physiology, P. A. 451
(481, MTThF 10:30) 334 Kingsley-P

†Smith, Everett Wallace, Instructor English, P. A. 502 K
(207a, M 10:15, T 9:15) Park Ave., Mayfield

†Smith, Howard Leslie, Professor Law, P. A. 212
(1, 10:15-11:15) 1057 Ramona

†Smith, James Perrin, Prof. Mineral. and Paleontology P. A. 600 Y
(329, 1:30-4:30) 1335 Cowper-P

[†Snow, William Freeman, Clinical Prof. Hyg. and Public Health,
2710 J St., Sacramento-S]

†Snyder, John Otterbein, Associate Professor Zoology, P. A. 330 Y
423, 1:30-3:30) 1345 Cowper

Somers, George B., Clinical Professor Gynecology, Kearny 1953
(Lane Hospital, 2-4) Clay and Webster, S. F. S.

†Stanley, Edward John, Instructor Woodworking, P. A. 544 K
(500, 8:15-4:30) 269 Hawthorne P

Starks, Chloe Lesley, Instructor Graphic Art, P. A. 434 Y
(Studio, TWThF 1:30-4:30) 1115 Ramona-P
†Starks, Edwin Chapin, Assistant Professor Zoology, P. A. 434 Y
(426, 1:30-4:30) 1115 Ramona
†Stillman, John Maxson, Professor Chemistry, Local 48
(44, 2-5) 2 Alvarado
†Stillman, Stanley, Professor Surgery, West 8819
(2101 Webster St. 2-4) 2336 Broadway, S. F.-S.
Stoltenberg, Clara S., Associate Professor Physiology, Local 24
(485, MW 9:15-12:15, ThF 1:30-4) 7 Alvarado
†Stuart, Henry Waldgrave, Professor Philosophy, Local 126
(416, MF 8:30-9:15, W 11:30-12) 8 Alvarado
Sutliff, Helen Binninger, Chief Cataloguer Library,
15 Salvatierra
†Swain, Robert Eckles, Professor Chemistry, P. A. 247
(33c, 2-4) 638 Channing-P
Templeton, Eugene Crittenden, Acting Instructor Mining, P. A. 509 K
(340, 8:15-12:00, 1:30-5) 375 Everett-P
†Terman, Lewis Madison, Assistant Professor Education, P. A. 1442-R4
(54, MWTh 3-3:30) Menlo Heights
†Townley, Sidney Dean, Associate Professor Applied Math., Local 16
(45, TTh 11:15-12) 33 Salvatierra
†Treat, Payson Jackson, Associate Professor History, Local 128
(230, MWF 11-11:25, TTh 10:15-11) 27 Salvatierra
Weymouth, Frank Walter, Instructor Physiology, Local 13
(484) 32 Encina
[†Whitaker, Albert Conser, Professor Economics, Chicago, Ill.]
†Wilbur, Ray Lyman, Professor Medicine, P. A. 46
(Faculty Room, Clinical Bldg., S. F., 11-12) 1201 Bryant P
†Wing, Charles Benjamin, Professor Structural Eng'r., P. A. 401K
(278, 11:15-12:15) 345 Lincoln
†Woodward, Frederic Campbell, Professor Law, Local 62
(3, 11:15-12:15) 21 Salvatierra
Young, Hayes Wilson, Instructor Metallurgy, Local 13
(560, 1:30-4:30) 109 Encina
†Young, Stewart Woodford, Professor Physical Chemistry, P. A. 390 L
(46c, 9:30-12, 2-5) Bryant and Tennyson-P
†Zinsser, Hans, Professor Bacteriology, P. A. 299
(Museum, Sec. 3, room 2, 2-3) 427 Embarcadero-P

DEPARTMENTAL AND OTHER ASSISTANTS

*Adler, Howard F., in Medicine, 126 Stockton, S. F. S.
Alvarez, Walter Clement, in Medicine, 23 Palm Ave., S. F.-S
[1]Arkin, M. L., in Pathology, 2210 Webster, S. F.-S.
Armstrong, John W. F., in Applied Mathematics, College Terrace
Ayers, Murray Chase, in Civil Eng. and Applied Math., 425 Waverley-P
Ball, Carroll D., in Civil Engineering, Stevens Creek Rd., S. J.-S
Banham, Frank Daniel, in Mechanician Shop, Foreman, 713 Emerson-P
Banks, William Henry, in Medicine, 4402 California, S. F.-S
Barnes, Gladys Wolcott, in English, 915 Channing-P
Batkin, Paul Jay, in English, 26 Lasuen
[2]Beal, Carl Hugh, Curator Collections, Geology, 459 Hamilton P
Beaver, Ella Wissie, in History, . . . Madrono Hall
Bell, Linda May, in History, 1 Alvarado
[1]Bell, May Knight, in Entomology, 532 Homer-P
Bliven, Bruce Ormsby, in English, 310 Ramona Bldg.
Blood, Charles Newman, in Civil Engineering, 405 Kipling
Bly, Edwin P., in Applied Mathematics, 15 Alvarado
Boulware, Lucretia, Order Department, in Library, 165 Waverley-P
[2]Boundey, Elmer James, in Mineralogy, 194 Moorpark S. J. S.
Bradley, Helen, in Romanic Languages, 645 Lytton-P
Brooks, Lucia May, Periodical Dept., in Library, Box 354, S. J.-S
Brown, Agnes Elizabeth, Loan Desk in Library, 412 Cowper-P
Brown, Marguerite, in Library, 23 Roble
[2]Brown, Ruth Wentworth, in Latin, 10 Alvarado
Budge, Alexander Gron, in Mechanical Engineering, 6 Salvatierra
†Burbridge, Harry Carleton, in Physics, 301 Kipling-P
Campbell, Helen, Sec. Committee on Public Health, 1028 Bryant-P
[1]Cary, Edward Guilford, in Bacteriology, 1106 Bryant-P
Clark, William Redwood Price, in Medicine, 982 Hayes, S. F.-S
Cleveland, Maude, in Roble Gymnasium, 15 Salvatierra
Coe, Arthur Frederic, Stenographer in Law Department, 43 Encina
[2]Cole, Ralph G., in Economics, Encina
Coover, John Edgar, in Psychology, University Park
Corbaley, Frank E., Lab. Attendant, Electrical Eng., University Hotel-P
Cottrell, Joseph Paul, in Library, 36 Encina
Cox, William Edward, in Economics, 16 Salvatierra
[1]Cramer, Thomas Meredith, in Chemistry, 675 Channing-P
[1]Crawford, David Livingston, in Entomology, Encina

[1]Crawford, James Porter, in Encina Gymnasium,	119 Encina
Crook, Maud L'Anphere, in Roble Gymnasium,	756 Bryant
[2]Cross, Robert John, in Chemistry,	Evergreen Park M
Daley, Gertrude Annie, in Pathology,	1955 Pine, S. F.-S
Davis, Edna Grayce, in Roble Gymnasium,	333 Waverley-P
Dole, Kenneth Llewellyn, in Encina Gymnasium,	80 Encina
Draper, Roscal Leroy, in Physiology,	58 Encina
Duryea, Robert Francis, in Civil Engineering,	308 Lincoln
Dyer, Thomas Lafayette, in Library,	199 Encina
Edwards, Marjorie, in President's Office,	2 Salvatierra
Endres, Herman, in Civil Engineering,	Encina
Ewell, Elmer R., Custodian, Chemistry Laboratory,	623 Middlefield-P
Fleming, Clarence E., in Economics,	39 Encina
Forbes, William Boomer, Stenographer, Mech. Eng.,	8 Salvatierra
Franklin, May, Order Dept., Library,	9 Santa Inez
Fulkerson, Charles Merrill, in Chemistry and Encina Gym.,	2 Lasuen
Gleason, Rutherford Erwin, in Applied Mathematics,	251½ Emerson-P
Goddard, Win Rawdon, in Chemistry,	305 Emerson-P
Gregg, Harley C., Machinist Helper, Mech. Lab.,	Evergreen Park
[2]Grundy, Edith Florence, in Latin,	28 Madrono
Halcombe, Norman Marshall, in Civil Engineering,	111 Encina
Hadden, Elizabeth, Cataloguer, Library,	1157 Ramona-P
Hall, Anna Gertrude, Cataloguer, Library,	628 Emerson-P
Hatfield, George Juan, in Law Library,	608 Kingsley P
†Havens, Myrtil Cole, Mechanician, Machine Shop,	465 Hamilton-P
Hawes, Ben Merrill, in Chemistry,	173 Encina
Hayes, Harriet, in Library,	9 Roble
Hilmer, Netta Haffner, in German,	151 Cowper P
Hilton, Frank Howard, in Encina Gymnasium,	26 Lasuen
[2]Holbrook, Mary, Matron, Roble Gymnasium,	
Holeman, George Stevenson, in Encina Gymnasium,	7 Encina
Hollmann, Emil Frederic, President's Stenographer,	56 Encina
Horn, John Stephen, in Chemistry,	555 Lytton-P
Horn, William Clemons, Cust. of Shops, Mech. Eng.,	234 Emerson-P
Howes, Roy Francis, in History,	219 Ramona-P
Hyatt, Shirley, in Physics,	222 Kingsley-P
[2]Hyde, Clarence E., in Medicine,	240 Stockton, S. F. S.
[1]Jameson, Eloise, in Chemistry,	53 Roble
Jolivette, Hally D. M., in Botany,	1 Alvarado
[1]Jones, Robert Alton, in Chemistry,	Kipling and University
Keefer, Chauncey Tennent, in Mechanical Engineering,	109 Encina

Keen, Sadie, Stenographer, Geology and Mining, 1221 Webster-P
Kirby, Sarah D., Stenographer, History, 411 Waverley-P
Knollin, Ernest Ray, in Encina Gymnasium, 78 Encina
Lacey, William Noble, in Chemistry, 15 Alvarado
[1]L'Anphere, Clara, Matron, Roble Gymnasium, 576 Bryant
Lawrence, George Louis, in Romanic Languages, 16 Alvarado
Luker, Benjamin Franklin, in Romanic Languages, 909 University-P
Luttrell, Peter Harrison, in Medicine, 210 Post S. F.-S
Lyman, George Dunlap, in Medicine, 240 Stockton S. F.-S
McCready, Harry Lewis, in Civil Engineering, 633 Channing-P
McJunkin, Narcissa, in Medicine, 731 Buena Vista S. F.-S
McWilliams, Charles Kirkton, in Chemistry, 502 S. 8th S. J. S.
[2]Marcus, Jean, in Lane Library, 799 Clayton, S. F. S.
Martin, Thomas Powderly, in History, 142 Encina
Mayer, Kenneth, Clerk in President's Office, Mayfield
Meinhard, Arthur Richard, in Bacteriology, 401 Lowell-P
Metz, Charles W., in Bionomics, 196 Encina
Moffitt, George Wilber, in Physics, 603 Waverley-P
Morgan, Jeannette C., Cataloguer, Library, 5 Salvatierra
Nagel, Helen, in Chemistry, Castilleja School
Nelson, Hans Christian, in Law Library, 127 Encina
[1]Newcomer, Erval Jackson, in Entomology, 1015 Forest Court-P
Newman, Ollis Willard, in Library, 24 Encina
Ophüls, Louise, in Lane Library, 114 Walnut, S. F.-S
Owen, Ethel, in Roble Gymnasium, 63 Roble
Paine, Russell, in Anatomy (Technical Assistant) 815 Kipling-P
Park, Carl Joseph, Lantern Operator, President's Office, 51 Encina
Park, Charles V., Desk Assistant, Library, 142 Encina
Patterson, William Herbert, in Law Library, Palo Alto-P
Peckham, Ignatius Martin, in Law Library, 74 No. 12th S. J.-S
[2]Pollock, Ralph Carleton, in Chemistry, 1140 Bryant P
Ramsey, Agnes C., Mimeographer, Eng., Educ. & Rom. Lang., 20 Lasuen
Randall, Josephine Louise Dows, in Botany, 1533 Waverley
Rible, Blanch, in Greek, 5 Salvatierra
Richardson, Eulalia, in Physics, 1010 Bryant-P
[1]Risling, Bertram August, in Pharmacology, 935 Webster-P
Romero, Benjamin, Janitor, Lane Hospital Lane Hospital S. F.-S
Rouiller, Jeanne Rose, in Romanic Languages, 431 Channing-P
Russell, Frank M., Mimeographer, Economics, 26 Lasuen
Sandstrom, Arthur Charles, in Civil Engineering, 53 Encina
Schaller, Walter F., in Medicine, 126 Stockton S. F.-S

Schaupp, Karl Ludwig, in Physiology, 17 Alvarado
Scofield, Frank Alson, Mimeographer, President's Office, 51 Encina
[2]Scholefield, Crighton Welch, in Mechanical Eng'r., 15 Alvarado
Scott, Thomas Benjamin, Store-keeper, Chemistry Lab., Mayfield
Seeley, Marjory, in History, 46 Roble
Shaw, Sidney Burton, in Civil Engineering, 65 Encina
Shoemaker, Clyde Clarence, in Law Library, 26 Lasuen
Short, Frances Elizabeth, in Education Library, 555 Lytton-P
Singer, Dorothy Elizabeth, in Greek, 6 Madrono
Skolfield, Esther May, in Physiology, Cupertino
Slack, Walter, in Law Library, Encina
[1]Small, Horatio Leverett, Curator Collection, Geology, 334 Cowper-P
[2]Smiley, Frank Jason, in Botany, 446 Hamilton P
Smith, Mary Elvira, Assistant Classifier, Library, 611 Waverley-P
Smith, Talmage Laughner, in Library, 199 Encina
[1]Spooner, Georgina B., in Bacteriology, 381 Lincoln-P
Stapleton, Leona Esther, Stenographer, President's Office, 5 Lasuen
Stidston, Russell Osborne, in English, 757 Homer-P
Stillman, Minna, in Registrar's Office, 2 Alvarado
Stillson, Frank Leonard, Custodian, Encina Gymnasium, 451 Ruthven-P
[1]Stinson, Sylvia Della, in Library, 649 Lytton P
Strachan, Nina, Reference Room, Library, 422 Tasso-P
Stuart, Mary Virginia, in Mathematics, 25 Roble
[2]Talbert, Wilford Ebenezer, in Education, 315 High
Taylor, Arthur in Civil Engineering, 6 Lasuen
Taylor, Leroy Edward, in Library, 244 Webster-P
Thompson, Della, Cataloguer, Library, 1 Santa Inez
Thompson, William Francis, in Zoology, 32 Encina
†Thorne, Isaac Walton, in Surgery, 2634 Broderick S. F.-S
Todd, Hannah Lillian, in Library, 835 Waverley-P
†Uhlman, Walter, Engineering, Mechanical Laboratory, 420 Emerson-P
Vaughn, Romney Leigh, in Civil Eng. and Applied Math., 95 Encina
Wenk, Morris, in Physics (Technical Assistant) 25 Salvatierra
West, Howard Frank, in Physiology, 230 Kellogg-P
Wetmore, Clyde T., in Encina Gymnasium, 119 Encina
Williamson, Laura Agnes, Cataloguer, Library, 466 Ruthven-P
Winterberg, Walter Hoepfner, in Surgery, 1925 Broadway-P
Wishard, Helen, in Music, 251 Emerson-P
Wolff, Franklin Fowler, in Philosophy, Kellogg near Emerson-P
Wood, Frederick Bertram, in Law Library, 4 Salvatierra
Woodruff, Mary Jeannette, Stenographer, Library, Mountain View-M

BUSINESS OFFICE

Ames, E. M., Voucher Clerk.....19 Lasuen
Beebe, H. W., Office Manager.....531 Lytton
Blodgett, D. P., Bookkeeper.....268 Homer
Bonhag, J. P., Clerk.....661 Gilman
Hadden, (Miss) F., Stenographer.....1157 Ramona St.
Lathrop, C. G., Treasurer and Business Manager.....Alta Vista
Monasch, D., Purchasing Agent.....Nevada Bank Bldg., S. F.
Rich, S. H., Cashier.....3180 Washington St., S. F.
Usinger, Charles F., Auditor.....San Jose
Mills, J. P., Storekeeper.....17 Salvatierra
Dorgan, M. H., Foreman Plumber.....Mayfield
Freedman, S., Foreman.....Mayfield
McDonnell, J. W., Foreman Electrician.....Palo Alto
Luff, D. H., Chief Gardener.....Palo Alto
Peterson, Harry C., Curator Museum.....672 Homer
Quinn, A. A., Clerk Encina.....Palo Alto
Schilling, J. C., Foreman Carpenter.....529 Addison
Smith, G. B., Foreman Painter.....751 Ramona
Hewston, J. E., Farm Superintendent.....Stanford University

STUDENTS

Name; home residence; major subject; status; University residence; post-office. Post-office in all cases *Stanford University* except where university residence is fol lowed by initial letter of town ('P' indicates *Palo Alto* post-office; 'Mayfield, M.' *Mayfield* post-office; etc.) Street address *Palo Alto* or *Campus* unless otherwise named.

Status—gr., graduate student; sp., special student. The figures after major subject indicate the number of units of university work completed (and counting toward the 120 units required for graduation), no account being taken of 'deferred,' 'incomplete,' or 'conditioned' work. The dagger (†) indicates unadjusted standing from other colleges and universities. (Phys.-Physics; Phyl.-Physiology.)

The superior number [1], prefixed to the name of a student, indicates registration for the first semester only; [2] indicates second semester only.

Abbott, Helen Stewart : Salinas,	Hist. 41,	17 Salvatierra
[2]Abell, H. Leslie : San Jose,	Educ., 153	W.Whitney S.J.S.
Ackley, Wenonah Gladys : Palo Alto,	Chem. 41,	481 University P
Adam, Edward Niles : Melville, Mont.,	E. E. 117,	Encina
Adams, James Douglass : Stanford Univ.,	Pre L. 16,	9 Alvarado
Adams, Robert Gemmell : Oakland,	C. E. 40,	Beta Theta Pi
Adcock, Robert Glover : Salinas,	C. E. 34,	169 Encina
Addleman, Clarence Lloyd : El Centro,	M. E. 14,	219 Ramona P
Ahlswede, Ada Dorothy : Pasadena,	Econ. 82,	Kappa A. Theta
Akahoshi, Ichiji Miyata : Kumamoto, Jap.,	Econ. 75,	Japanese Club
Alderman, Merle Norton : Corona,	Econ. 101,	35 Encina
Alderton, Barbara : Brooklyn, N. Y.,	Germ. 13,	Pi Beta Phi
Alderton, Dorothy M., : Brooklyn, N. Y.,	Germ. 91,	Pi Beta Phi
Allcutt, Chester Thorne : Pasadena,	E. E. 11,	4 Lasuen
[2]Allen, Anais Julia : South Pasadena, A. B., Stanford, 1911.	Engl. gr.,	25 Madrono
[1]Allen, Anson Gaston : Astoria, Ore.,	Phyl. 2,	189 Bryant P
Allen, Beverly Sanders : Lincoln,	E. E. 13,	181 Lytton P
Allen, Charles Lewis Jr. : So. Pasadena,	Econ. 106,	82 Encina
Allen, Elizabeth Gladys : Los Gatos,	Hist. 10,	Gamma Phi Beta
Allen, Florence Carol : Spokane, Wash.,	Graph. 31,	Pi Beta Phi
Allen, Fred Cruickshank : Bakersfield,	Law sp. 3,	Delta Chi
Allen, Martin Whitney : Spokane, Wash.,	Engl. 12,	Phi Kappa Psi
Allen, Nellie : Sutter Creek,	Hist. 104,	21 Lasuen
Allum, Ruth Alice : Riverside,	Graph. 41,	22 Lasuen
Ambrose, Arthur Warren : Lockeford,	Geol. 82,	59 Encina

Amsden, Donna Hinds : Los Angeles,	Engl. 75,	Delta Gamma
Anderson, Clarence S. : Blackfoot, Ida.,	Pre L. 10,	20 Lasuen
Anderson, Frank Edward : Los Angeles,	E. E. 80,	147 Encina
Anderson, Howard Salsbury : Santa Cruz,	Pre L. 13,	Kappa Sigma
Anderson, Laurel Edwin : Burlingame,	Pre L. 42,	Burlingame B
Anderson, Mayme Minerva : Tulsa, Ok.,	Educ. 14,	250 Lowell P
Anderson, Robert Edwin : San Francisco,	Geol. 79,	161 Encina
Anderson, Willis A. : Roswell, N. M.,	Pre L. 25,	603 Waverley P
Andreen, Harry Mayo : Woodside,	Geol. 75,	195 Encina
Andresen, Ludwig Paul : Portland, Ore.,	Geol. 110,	Cardinal Club
Andrews, Helmus Weddel : San Diego,	Pre L. 47,	Kappa Alpha
Andrews, Rupert Burke : San Diego,	E. E. 71,	Kappa Alpha
[2]Angell, Mabel Bayard : Palo Alto,	Psych.,	1200 Bryant P
Angell, Thomas Francis B. : Palo Alto,	Grk. 15,	1200 Bryant P
Appleby, Ray : Milwaukee, Ore.,	Phyl. 4,	Kappa Alpha
Appleton, Harry : San Jose,	Chem. 13,	546 SWhitney SJS
Arakawa, Futoshi : Hilo, Hawaii,	C. E. 53,	Japanese Club
Arakawa, Santaro : Hiroshima Ken, Japan, A. B., Stanford, 1911.	C. E. gr.,	733 Ramona
Argabrite, Clarence Cannon : Ventura,	E. E. 97,	160 Encina
Argabrite, John Jay : San Jose,	E. E. 99,	157 Encina
Argabrite, Walter Marion : Ventura,	E. E. 63,	160 Encina
Argall, Leland Stanford : Spokane, Wash.,	Pre L. 16,	Cardinal Club
Armstrong, John W. F. : Fivemiletown, Ire.,	E. E. sp. 80,	College Terrace
Arnold, Joseph E. : Cottage Grove, Ore.,	Phyl. sp.,12,	319 Alma P
Arrell, Dell Bernie : Moline, Ill., A. B., Stanford, 1912.	Geol. gr.,	Phi Gamma Delta
[2]Asakura, Shigetaka : Miye-Ken, Japan, Gr. Lit., Waseda University, 1908.	Engl. gr.,	644 Emerson
Ashford, Harry Thomas : Fruita, Colo.,	Phyl. 12,	327 Emerson P
Atkinson, Arthur Garratt : Saratoga,	C. E. 108,	707 Bryant P
[2]Atkinson, Gerald Sanders : Saratoga,	C. E. sp.,	707 Bryant P
Atkinson, Irving Marshall : Saratoga,	C. E. 105,	191 Encina
Avery, Harold Tolman : San Jose,	C. E. 77,	260 S. 14 St. S.J.S.
Avery, Louise : San Jose,	Hist. 76,	Delta Delta Delta
Ayers, Murray Chase : Pasadena,	C. E. 137,	405 Kipling P
Bach, Ralph Emmett : San Diego,	Pre L. 44,	Delta Chi
[2]Bacon, Ellard Ansel : San Jose,	M. E. sp.,	174 N 3d S.J.S.
Bagley, Flora : Burlingame,	Lat. 104,	Burlingame B
[2]Baier, Harry Howard : Columbia,	Pre L. sp.,	11 Salvatierra
Bailey, Margery : Palo Alto,	Engl. 50,	207 Hawthorne P

Bakeman, Guy V. : Snohomish, Wash.,	Econ. 11,	5 Lasuen
Baker, Lois : Los Angeles,	Engl. 67,	Madrono
Baker, William Elliott : San Jose,	Educ. 49,	146 Encina
Baldwin, Beth : Salt Lake City, Utah,	Hist. 11,	Delta Gamma
Ball, Carroll Doyle : San Jose,	C. E. 108,	Stevens Cr. S. J.-S
Ball, Hazel Myra : San Jose,	Engl. 12,	Stevens Crk. S.J.-S
Bardin, Ethel Ora : Salinas,	Graph. 73,	22 Lasuen
Bargar, Margaret Elizabeth : Los Angeles, B. S., Buchtel College, 1894.	Engl. gr.,	621 High P
Barker, Anna Ruth : Palo Alto,	Math. 47,	219 Addison P
Barnard, Walter Everett : Worcester, Ms.,	Hist. † 12,	Phi Gamma Delta
[1]Barnes, Gladys Wolcott : San Francisco, A. B., Stanford, 1911.	Engl. gr.,	915 Channing P
Barnett, Clarence Bailey : Long Beach,	Econ. 22,	Delta Tau Delta
[2]Barnett, George Ingham : San Francisco,	Geol. 23,	Kappa Alpha
Barrow, Frank Elliott : Los Angeles,	Pre L. 63,	173 Encina
Barry, David Morse : Santa Barbara,	Econ. 13,	181 Encina
Barry, George Long : San Jose,	Phyl. 43,	Encina
Barry, Wm. Taylor Jr. : Santa Barbara,	Engl. 8,	143 Encina
Barshinger, Byron Walter : Gilroy,	Chem. 31,	100 Encina
Barton, Millar Dodge : Los Angeles,	C. E. 6,	Chi Psi
Baruch, Frederick Jr. : San Francisco,	E. E. 10,	14 Encina
Barzen, Alva Emrick : Pasadena,	Econ 15,	255 Ramona
[1]Bassett, Maude Helene : Los Angeles, A. B., Stanford, 1912.	Hist. 120,	Gamma Phi Beta
Bassett, William Waters : Escondido,	Pre L. 12,	179 Encina
Bassett, Winona : Pasadena,	Engl. 46,	Pi Beta Phi
Batcheller, Helen May : Los Angeles,	Hist. 42,	Gamma Phi Beta
Batkin, Paul Jay : Los Angeles, A. B., Stanford, 1910.	Law gr.,	Delta Chi
Baxter, Ethel Louise : Alexandria, Ind.,	Engl. 105,	Kappa A. Theta
[1]Bayley, George Harold : Los Angeles,	Geol. 57,	Sigma Chi
Beach, Frederick Harold : Palo Alto	Engl. 105,	712 Bryant P
Beach, Natalie Louise : Palo Alto,	Germ. 74,	712 Bryant P
Beach, Philip L. : Prescott, Ariz.,	E. E. † 8,	835 Waverley P
Beal, Blanche Iona : Palo Alto,	Span. 9,	459 Hamilton P
Beal Carl Hugh : Palo Alto,	Geol. 86,	459 Hamilton P
[1]Beal, Leona Zoe : Palo Alto,	Span. 7,	459 Hamilton P
Beal, Ralph Raymond : Palo Alto,	E. E. 109,	459 Hamilton P
Beall, Harry Hammond : Los Angeles,	Engl. 106,	129 Encina
Beanblossom, David W. : St. Joseph, Mo.,	Pre L. 91,	67 Encina

[1]Beard, Hawley Wetmore : San Francisco,	M. E. sp. 4,	2 Lasuen
Beard, Ruth : Modesto,	Lat. gr.,	10 Roble
A. B., Stanford, 1912.		
[1]Beattie, William Roland : Georgetown,	Graph. 28,	37 Encina
Beaver, Ella Wissie : Tulare,	Hist. gr.,	Madrono
A. B., Stanford, 1912.		
Beaver, George Lovell : Campbell,	M. E. 15,	31 Encina
Bedeau, Grover William : Marysville,	Pre L. 5,	71 Encina
Beebe, Charlie Elizabeth : Woodland,	Educ. 50,	18 Roble
Beebe, Mary Josephine : Woodland,	Hist. 11,	65 Roble
Beecher, Charles Edward : Monrovia,	C. E. 79,	192 Encina
Beeger, Henry Albert : Redwood City,	Econ. 67,	Redwood City R
Beharrell, Helen Elizabeth : San Diego,	Frn. 97,	Delta Delta Delta
Behrens, Earl Charles : Redding,	Pre L. 55,	66 Encina
Belcher, Frank Baker : Pomona,	Pre L. 63,	Theta Delta Chi
Bell, Dixie Alberta : St. Helena,	Germ. 78,	1 Alvarado
Bell, Gollin : San Francisco,	E. E. 13,	Encina
Bell, Linda May : St. Helena,	Hist. gr.,	1 Alvarado
A. B., Stanford, 1911.		
Beman, John Burris : Los Angeles,	Pre L. 107,	BetaTheta Pi
Bennett, Raine : Palo Alto,	Pre L. 13,	Theta Delta Chi
Bennett, Rose Margaret : San Diego,	Math. 110,	6 Madrono
Bentley, Georgia Helen : Palo Alto,	Bot. 10,	635 Homer P
Berry, Samuel Stillman : Redlands,	Zool. gr.,	79 Encina
A. B., Stanford, 1909; A. M., Harvard University, 1910.		
Best, Neil Orrin : Monterey,	C. E. 45,	8 Encina
Beurhaus, George H. : Tacoma, Wash.,	Chem. 73,	Phi Delta Theta
Bevier, George Jr. : Spokane, Wash.,	Chem.-Med. 110,	183 Encina
Bingham, Beatrice J. : Los Angeles,	Engl. 43,	21 Lasuen
Birch, Catherine Ida : Redlands,	Lat. gr.,	49 Roble
A. B., Stanford, 1911.		
Birdsall, Edward M. : Chadron, Nebr.,	C. E. 7,	Sigma Nu
Black, Edith Virginia : Santa Maria,	Engl. 44,	5 Cabrillo
Black, Sherman Lawrence : Monrovia,	Pre L. sp. 56,	187 Encina
Blanchard, Leslie : Sacramento,	Engl. 119,	Delta Delta Delta
Blanchard, Paul E. : Grant's Pass, Ore.,	Pre L. 81,	44 Encina
Bland, Reba : San Jose,	Ent. 14,	1 Alvarado
Blase, Roland Roy : No. St. Paul, Minn.,	C. E. 45,	Sigma Nu
Blauer, Emma Elizabeth : San Jose,	Educ. 70,	361 Vine St. S.J.-S
Blethen, Taylor Jay : Portland, Ore.,	Bot. 75,	19 Encina
[1]Bliven, Bruce Ormsby : Santa Cruz,	Engl. gr.,	310 Ramona Bldg.
A. B., Stanford, 1911.		

Block, Fred A. : Tacoma, Wash.,	Pre L. 12,	Sigma Chi
Blodget, Ward B. : Huntington Beach,	C. E. 9,	4 Lasuen
Bloeser, William Hargrave : Los Angeles,	Econ. 20,	Kappa Alpha
Blood, Charles N. : Esterbrook, Wyo.,	C. E. 106,	405 Kipling
Bly, Edwin Prescott : Los Angeles,	C.E. 78,	Alpha Tau Omega
Bodley, Edith May : Palo Alto,	Engl. 45,	353 Lytton P
Bodley, Ellison W. : Palo Alto,	Germ. 87,	353 Lytton P
Boezinger, Frank : Palo Alto,	C. E. sp. 54,	176 Bryant P
Boezinger, Lydia Marie : Palo Alto,	Germ. 27,	176 Bryant P
Bohart, George Shambaugh : Palo Alto,	Chem. gr.,	856 Middlefield P
A. B., Stanford, 1911.		
[2]Bolin, John Siegfried : San Rafael,	Educ. 105,	San Rafael, S.
Bond, Rufus Gallatin : Santa Paula,	M. E. 45,	420 Hamilton P
Bonetti, Irene Marguerite : Santa Maria,	Hist. 43,	17 Salvatierra
Bonnett, Ed. Mortimer Jr. : Riverside,	M. E. 16,	19 Lasuen
Bonney, Robert Cecil : Roswell, N. Mex.,	Pre L. 26,	643 High St. P
[1]Boone, Bowers Bundy : Palo Alto,	Law sp. 19,	382 Lincoln P
[1]Boone, Cecilia Agnes : Palo Alto,	Ent. 23,	Alpha Phi
Bordè, Harry Joseph : Santa Monica,	Pre L. 34,	Ramona Bldg. P
Borden, Arthur Dickie : Palo Alto,	Bot. 78,	718 Bryant P
Borders, Harry L. : Marissa, Ill.,	Law gr.,	618 Fulton P
A. B., Washington University, 1910.		
Borough, Richard Marguerite : San Fran.,	Hist. 19,	1310 Taylor S.F.S.
Bostwick, Stewart Ashley : Mill Valley,	Pre L. 96,	Theta Delta Chi
[2]Bothwell, Charlotte L. : Salt Lake C., U.,	Hist. 21,	Delta D. Delta
Boughn, Sidney Lacy : Riverside,	Pre L. 62,	Theta Delta Chi
Boulware, Clark Lewis : Palo Alto,	Hist. 36,	169 Waverley P
Boundey, Elwin James : San Jose,	Geol. gr.,	194 Moorpark SJS
A. B., Stanford, 1911.		
Bowden, Mary Bethel : San Jose,	Hist. 68,	Kappa Kappa Ga.
Bower, Albert G. : Salt Lake City, U.,	Phyl.-Med. 96,	431 Univer. P
Bower, Wm. David : Salt Lake City, U.,	Pre L. 44,	Sigma Chi
Boyd, Forrest Edwin : Fowler,	Phyl. 10,	603 Lytton P
Boyd, Harold Chester : San Francisco,	C.E.73	Delta Kappa Epsilon
[1]Boyd, Harold Edward : Milpitas,	Geol. 142,	109 Encina
A. B., Stanford, 1912.		
Boyd, Marguerite Ruth : Easton,	Math. 46,	Kappa Kappa Ga.
Boyers, Luther Musson : Palo Alto,	Med. gr.,	1227 Byron P
A. B., Stanford, 1912.		
Boyle, Charles Emerson Jr. : Escondido,	Chem. 8,	750 Bryant P
Boyle, Margaret Louise : Escondido,	Engl. gr.,	750 Bryant P
A. B., Stanford, 1912.		

Boyle, William Archdall : San Rafael,	Phyl. 85,	16 Salvatierra
Bradford, Albert Grover : Eureka,	Pre L. 70,	106 Encina
Bradford, Warren Mead : Placentia,	E. E. 13,	359 Emerson P
Bradley, Anna Laura : Pasadena,	Econ. 67,	Pi Beta Phi
Bradley, Helen : Palo Alto,	Span. 55,	645 Lytton P
Brady, Emmett James : San Francisco, A. B., Stanford, 1911.	Med. gr.,	2124 Cal. S. F. S.
Brainerd, Fred Lindley : Los Angeles,	Chem. 71,	Kappa Sigma
Brandt, Emil Charles : Pasadena,	C. E. † 12,	Delta Upsilon
Branner, George Casper : Stanford Univ.,	Geol. 56,	Delta Upsilon
Bray, Lillian : Austin, Nev.,	Hist. 106,	12 Alvarado
Brekke, Mabel Adella : Los Altos,	Grk. 86,	Los Altos L
Breuner, John Jr. : San Francisco,	Pre L. 10,	Sigma Nu
Brewer, Edward Vere : Elyria, Ohio, A. B., Stanford, 1911.	Germ. gr.,	Coll. Pac. S.J.S
Bridgman, Roy Wade : San Jose,	Educ. 77,	343 So. 2d S.J.S.
Briggs, Gladys Watson : Los Angeles,	Frn. † 12,	Kappa Alpha The.
Briggs, Ivon Clay : San Francisco,	C. E. 76	Pine Cottage
Briggs, Revoe Carlisle : Pasadena,	C. E. 75,	16 Salvatierra
[1]Brinton, Margaret : San Diego, A. B., Stanford, 1909.	Math. gr.,	5 Salvatierra
Bromley, Angelica : San Francisco,	Hist. 38,	Delta Delta Delta
Brooke, Philip S. : Spokane, Wash.,	Pre L. 15,	Phi Kappa Psi
[1]Brookins, N. Orville : Dayton, Ohio,	Econ.,	Delta Tau Delta
Brooks, Anne : San Jose,	Lat. 81,	Pi Beta Phi
[1]Broomell, Harold F. : Tacoma, Wash.,	Pre L. 59,	Cardinal Club
Brown, Albert Skillman : Mendocino,	C. E. 103,	70 Encina
Brown, Claude Everett : Stanford Univ.,	Phyl. 48,	171 Encina
Brown, Comer Pitts : Duarte,	C. E. 47,	Theta Delta Chi
Brown, Earl Daniel : Campbell,	C. E. 105,	31 Encina
Brown, Floyd Cromwell : Selma,	C. E. 100,	83 Encina
[1]Brown, Harry Edgar : Sacramento, A. B., Stanford, 1912.	Econ. 124,	Kappa Sigma
[1]Brown, John Miller : San Jose,	Pre L. 12,	Sigma Alpha Epsi.
Brown, Lillian Harrison : Berkeley,	Engl. † 7,	17 Salvatierra
Brown, Marguerite : Palo Alto,	Educ. 79,	27 Roble
Brown, Ralph Waldo : Shawmut,	C. E. 75,	53 Encina
Brown, Ray Milton : Selma,	Hist. 23,	136 Encina
[1]Brown, Raymond Stanislaus : San Mateo,	Pre L. 39,	No. D, S.Mateo S
[2]Brown, Ruth Wentworth : Los Angeles, A. B., Stanford, 1904.	Lat. gr.,	10 Alvarado
Brown, Selden : Seattle, Wash.,	Pre L. 60,	Beta Theta Pi
Browning, Aaron P. : Santa Barbara,	C. E. 102,	104 Encina

Brubaker, Bruce : Azusa,	Pre L. 12,	315 Alma P
Bryan, Hugh Crawford : Napa,	Hist. 26,	Delta Tau Delta
Bryan, Miriam Alvada : Palo Alto,	Hist. 10,	Pi Beta Phi
Brydolf, Vernon Mars : San Bernardino,	Pre L. 51,	Sigma Nu
Buchly, Walter Eyster : Roswell, N. M.,	Econ. 79,	359 Emerson P
Buckingham, Elisabeth Lee : Palo Alto, A. B., Stanford, 1910.	Engl. gr.,	609 Kingsley P
Budge, Alexander Gron : Medford, Ore.,	M. E. 110,	Sigma Alpha Eps.
[1]Buffum, George Mitchel : Altadena,	Ecn. 89,	Delta Kappa Epsilon
Buker, Earl Leroy : Ceres,	E. E. 94,	148 Encina
[1]Bull, Edith Agnes : San Francisco,	Hist. 54,	Kappa Kappa Ga.
Bullard, Allen Ferman : Los Angeles,	Econ. 6,	Delta Tau Delta
Bullard, Helen Talbott : Los Angeles,	Hist. 45,	Kappa Alpha Theta
Bullis, Ileen : Los Angeles,	Hist. 52,	Alpha Phi
Burbank, Daniel Wellman : Santa Cruz, A. B., Stanford, 1909.	Law gr.,	Encina
Burbeck, William Baldwin : Pacific Grove,	E. E. 10,	405 Kipling P
Burbridge, Harry Carleton : Palo Alto, A. B., Stanford, 1908.	Phys. gr.,	301 Kipling P
Burg, Ruth Marion : Los Angeles,	Frn. 7,	Alpha Omicron Pi
Burke, Grace Lilian : Los Angeles,	Engl. 105,	Alpha Phi
[1]Burkham, Eleanor Frances : San Fran.,	Engl. 87,	9 Roble
Burns, Eugenia Stewart : San Jose,	Graph. 11,	Kappa Kappa Ga.
Burns, William Sherman : Chicago, Ill.,	Pre L. 31,	Phi Gamma Delta
Burnside, Irene Frances : Des Moines, Ia.,	Germ. 99,	Delta Gamma
[1]Burrell, Florence Cotton : San Francisco, A. B., Stanford, 1910.	Ent. gr.,	Kappa Alpha Theta
Burrell, Logan : Portland, Ore.,	Geol. 78,	Encina
Burris, Arthur Fredrick : Los Angeles,	Geol. 25,	Alpha Tau Omega
Burrows, Harold Herbert : Salt Lake City,	Phyl. 7,	4 Lasuen
[2]Busby, Frederick Harrison : A. B., University of Michigan, 1909.	Med. gr.,	2237 Cal., S.F.S
[2]Bush, Barnard B. : Pasadena,	Pre L. 92,	106 Encina
[1]Bush, George Barnard : Riverside, A. B., Stanford, 1910.	Law gr.,	Delta Chi
Bussert, Leonardo Money : Los Angeles,	E. E. 46,	431 University P
Butcher, William Preston : Santa Barbara,	Pre L. 76,	Encina
Cage, Albert Gallatin : Riverside,	E. E. 49,	Kappa Alpha
Cain, Ruth : Salt Lake City, Utah,	Engl. 14,	35 Madrono
Calderwood, Everett Morse : Palo Alto,	E E. 77,	531 Cowper P
Callanan, Joseph Ignatius : San Francisco,	Med. † 11,	329 Hawthorne P
[1]Cameron, Ernest Roy : Union, Me.,	E. E. sp.,	133 Encina

Campbell, Clarence P. : Los Angeles,	M. E. 90,	2 Encina
Campbell, Erroll Preston : Modesto,	C. E. 40,	13 Encina
Campbell, Samuel J. : Mt. Carroll, Ill.,	Econ. 34,	19 Lasuen
Card, Thomas Adam : Palo Alto,	Phyl. 10,	764 Channing P
Carlton, Dave Pierce : Riverside,	C. E. 44,	45 Encina
Carmody, Frank James : Elmira, N. Y.,	Pre L. sp. 14,	411 Kipling
[1]Carr, Brenton Stanley : Los Angeles,	Pre L. 5,	Kappa Sigma
Carson, Marion Vromm : Palo Alto, A. B., Stanford, 1911.	Engl. gr.,	659 Melville P
[1]Carson, Mervin Bishop : Palo Alto, A. B., Stanford, 1912.	C. E. 125	Xazmin House
Carter, Louise Noble : Los Angeles,	Engl. gr.,	Pi Beta Phi
[1]Carter, Russell Brace : Los Angeles,	Pre L. 80,	Delta Upsilon
Cartwright, James Henry : Oregon, Ill.,	Econ. 13,	20 Lasuen
Carus, Clayton Douglass : Palo Alto,	Hist. 93	241 Cowper P
Carus, Evelyn Temperance : Palo Alto,	Hist. 58,	551 University P
[2]Cary, Edward Guilford : San Francisco,	Med. sp. 129,	2124Cal.,S.F.S.
Case, Eunice : Kalama, Wash.,	Lat. 109,	19 Roble
[1]Cashbaugh, James Anthony : Bishop,	Pre L. 123,	10 Encina
Cass, Donald : Los Angeles,	Phyl. 37,	Zeta Psi
Cass, Louis : Los Angeles,	Geol. 59,	Zeta Psi
Castle, Otis Henry : Pasadena,	Pre L. 44,	Delta Chi
Cecil, Neil McComas : Modesto,	C. E. 110,	12 Encina
[2]Chalfant, Alice Jessie : San Jose,	Germ. 93,	21 Alvarado
[1]Chamberlin, Albert Frank : Pasadena,	Engl. † 4,	Encina
Champion, Grace : Colton,	Hist. 41,	22 Lasuen
Chandler, Alice May : Los Angeles,	Germ. 42,	Alpha Omicron Pi
Chandler, Kathleen : San Diego,	Hist. 13,	Pi Beta Phi
Chandler, Wilbur Ray : Fresno,	Hist. 79,	126 Encina
Chapman, Herbert Samuel : Clayton,	Phyl. 42,	10 Encina
[2]Chapman, John Frye : Redlands, A. B., Stanford, 1909.	Phyl. gr.,	Encina
Check, Elliott Everett : San Francisco,	Graph. 11,	730 Bryant P
Check, Neoma : San Francisco,	Econ. 48,	730 Bryant P
[2]Cheda, Henry Prosper : San Luis Obispo,	Geol. 115,	130 Encina
Childs, Grace : Redlands,	Hist. 107,	Gamma Phi Beta
Childs, Leroy : Redlands,	Ent. 73,	Phi Delta Theta
Chiles, Chester Arthur : Ellensburg, Wn.,	Pre L. 32,	35 Salvatierra
[2]Chislett, William, Jr., Los Angeles, A. B., Stanford, 1910.	Lat. gr.,	20 Lasuen
[1]Christin, Charles Alfred : San Francisco, A. B., Stanford, 1912.	Pre L. 120,	Delta Upsilon

Claggett, Strabo Vivian : Long Beach,	Pre L. † 10,	Chi Psi
Clark, Alvan Witcombe : San Jose,	Econ. 12,	898 So. 8th S. J. S.
Clark, Birge M. : Stanford University,	Graph. 47,	4 Cabrillo
Clark, Douglas : Menlo Park,	Geol. 43,	Menlo Park M
Clark, Edmund Starling : Los Angeles,	M. E. 11,	Zeta Psi
[1]Clark, Gladys Willamary : Gilroy,	Graph. gr.,	25 Roble
A. B., Stanford, 1911.		
Clark, Hazel : Redlands,	Graph. 14,	37 Roble
Clark, Laura Cornelia : San Jose,	Math. 15,	1022 Bird, S. J. S
Clark, Lester Percy : Redlands,	C. E. 112,	178 Encina
Clark, Mabel Edith : Redlands,	Zool. 14,	37 Roble
Clark, Mabel Irene : Ventura,	Germ. 47,	21 Lasuen
Clark, Melville Nathaniel : Altadena,	E. E. 95,	483 Channing P
[2]Clark, Paul Archibald : Stanford Univ.,	Hist.,	7 Alvarado
Clark, William : Los Angeles,	C. E. 12,	133 Encina
Clattenburg, Herbert Alexander : Eureka,	Phyl. 12,	74 Encina
Claussen, Thomas Hibben : Sausalito,	C. E. 37,	125 Encina
Clawson, James Imre : Los Angeles,	Econ. 40,	Delta Upsilon
[1]Clift, Helen Miller : Tacoma, Wash.,	Hist. 120,	21 Lasuen
Cline, George Willis : San Jose,	Phyl. 69,	349 N. 14th S.J.S
[1]Clithero, Electa : Boise, Idaho,	Hist. 76,	Delta Delta Delta
Close, Carlos Cooper : Spokane, Wash.,	Pre L. 53,	Phi Kappa Psi
Close, Otha Harrison : Orangevale,	Educ. 98,	3 Encina
Clough, Minnie Pamelia : San Diego,	Engl. gr.,	611 Waverley P
A. B., University of Michigan, 1903.		
Clover, Philip Petrie : Los Angeles,	C.E. 49,	Delta Kappa Epsilon
[2]Clowe, Charles Edward : Woodland,	Geol. 54,	Phi Gamma Delta
Cluff, Alfred Thomas : Reno, Nev.,	Pre L. 38,	4 Encina
Coates, Roy Dean : Salt Lake City, U.,	C. E. 82,	Sigma Chi
[2]Coberly, Clarence James : Los Angeles,	M. E.,	Alpha Tau Omega
Cochrane, Helen : San Francisco,	Hist. 93,	22 Lasuen
Coe, Arthur Frederic : Los Angeles,	Law gr.,	43E ncina
A. B., Stanford, 1909.		
Coffey, George McD. Jr. : Choteau, Mont.,	Law gr.,	1001 Ramona P
A. B., University of Missouri, 1909.		
Coffin, Charles Watson : Marion, Ind.,	Med. gr.,	Evergreen Park
A. B., De Pauw University, 1910.		
Coffin, Chester LeRoy : Reno, Nev.,	Pre L. 97,	85 Encina
Coggins, Anna P. : Germantown, Pa.,	Germ. 57,	1147 Byron P
[1]Coggins, Edith Irene : Germantown, Pa.,	Engl. 54,	1147 Byron P
Cole, Charles Arthur : Ventura,	E. E. 50,	Cardinal Club

[1]Cole, Ralph G. : Girard, Kans., A. B., Stanford, 1912.	Econ. 123,	106 Encina
Coleman, David : Los Angeles,	Econ. 6.,	Delta K. Epsilon
[2]Coleman, Earl Hampton : Los Altos, A. B., Stanford, 1906.	Ent. gr.,	Los Altos L
Coleman, Emily Augusta : Tacoma, Wash.,	Hist. 74,	Alpha Phi
Coleman, Thomas Lynch : Los Angeles,	Hist. 100,	Delta Kappa Epsil.
Conant, David Jordan : San Jose,	M. E. 44,	77 Encina
Conklin, Harold Reese : San Diego,	M. E. 9,	5 Lasuen
Conkling, Julia Hamilton : El Centro,	Math. 10,	23 Roble
Connell, George Albert : San Jose,	Chem. 41,	151 Encina
[2]Cook, Jessie Loring : San Jose, A. B., Stanford, 1902; A. M., 1911.	Hist. gr.,	Miss Harker's P
Cooke, John Daniel : Beloit, Kans.,	Lat. 18,	333 Kipling P
Cookson, Harold Westley : Palo Alto,	Pre L. 7,	465 University P
Coombe, Ila Eloise : San Francisco,	Hist. 57,	Kappa Kappa Ga.
[2]Cooper, Dorothy Jane : San Francisco,	Hist.,	23 Madrono
Cooper, Jay T. : Woodland,	Pre L. 105,	35 Encina
Cooper, Warren Gosselin : Eureka,	Geol. 63,	21 Encina
Cooper, Walter H. : Los Angeles,	Chem. 17,	Pine Cottage
Coover, John Edgar, Stanford University, A. B., Stanford, 1904; A. M., 1905.	Psych. gr.,	Menlo Heights
Corbet, Edward Burke : San Francisco,	Geo. 89,	Sigma Alpha Epsil'n
[2]Cordova, Joaquin F. : Quito, Ecuador,	Econ.,	Burlingame B
Cornwall, Edward Augustus : Redlands,	Pre L. 43,	80 Encina
[2]Cory, Margaret Esther : Fresno,	Hist.,	Madrono
Cottrell, Joseph Paul Jr. : Colton,	Pre L. 65,	36 Encina
[2]Couch, John Daniel : Palo Alto,	Geol.,	657 Webster P
Covington, Euclid M. : Bowling G'n, Ky.,	Engl. 5,	262 Kingsley P
Cowan, Floyd Wellesley : Fresno,	Pre L. 48,	Chi Psi
[2]Cox, Anna Shipley : San Jose, A. B., Stanford, 1909.	Lat. gr.,	855 Chapman SJS
Cox, Catharine Morris : San Jose, A. B., Stanford, 1912.	Germ. gr.,	855 ChapmanS.J.S
Cox, H. Ben : San Jose,	Pre L. 42,	146 Encina
Cox, Joel Bean : Honolulu, H. T.,	C. E. 50,	60 Encina
Cox, William Edward : Hillsboro, Tex., A. B., University of Texas, 1909; A. M., 1910.	Econ. gr.,	16 Salvatierra
Coyle, Albert Freeman : San Jose,	Pre L. 13,	528 So. 2d S. J. S.
Cram, Clara : East Highlands,	Engl. 46,	Pi Beta Phi
Cramer, Margaret : Palo Alto,	Germ. 13,	675 Channing P

[1]Cramer, Thomas Meredith : Palo Alto, A. B., Stanford, 1911.	Chem. gr.,	675 Channing P
Crandall, Harriet Ruth : Palo Alto,	Graph. 41,	737 Waverley P
Crandall, Hector : Palo Alto,	Chem. 76,	91 Encina
Crary, Gordon Byxbe : Los Angeles,	Pre L. 50,	Kappa Sigma
Crawford, David Livingston : Claremont, A. B., Pomona College, 1911.	Ent. gr.,	Encina
Crawford, James Porter : San Jose,	Phyl. Med. 112,	119 Encina
Crellin, Ruth : Pleasanton,	Hist. 74,	Alpha Phi
Cressey, Josephine : Modesto,	Germ. 79,	12 Alvarado
Crippen, Roy Daniel : San Diego,	M. E. sp. 29,	Delta Tau Delta
Crippen, Ruth Melissa : San Diego,	Hist. 91,	Alpha Omicron Pi
[2]Crook, Maud L'Anphere : Palo Alto,	Engl. †	756 Bryant
Crosby, Clara : Santa Cruz,	Zool. 60,	55 Roble
Crosby, Ethel Lee : San Diego,	Engl. 105,	602 Cowper P
[2]Cross, Robert John : Mayfield, A. B., Stanford, 1911.	Chem. gr.,	Evergreen Pk. M
[2]Crutchfield, Clara Alan : San Francisco,	Engl. †	9 Roble
Cullen, Edward James : Gilroy,	C. E. 125,	52 Encina
Cullen, John Francis : Gilroy,	E. E. 81,	52 Encina
[1]Cundiff, Stuart Albert : Riverside,	C. E. 2,	Kappa Alpha
Cuneo, Irene Rose : San Mateo,	Frn. 21,	Alpha Omicron Pi
Current, Pauline Jeanette : Red Key, Ind.,	Germ. 73,	667 University P
Currier, Donald Locke : Cupertino,	Ent. 11,	Cupertino C
Currier, Ruth Leslie : Cupertino,	Germ. 60,	Cupertino C
[1]Curry, William Graham : Roseburg, Ore.,	Law sp. 52,	Kappa Alpha
Curtice, Louise Elizabeth : Spokane, Wn.,	Hist. 41,	Alpha Omicron Pi
Curtis, Lucile Rose : Los Angeles,	Hist. 13,	Alpha Omicron Pi
Curtner, Marion Lucy : Warm Springs,	Germ. 56	Gamma Phi Beta
Cushman, Eva : Acme, Ore.,	Germ. 73.	2 Roble
Dalzell, William Campbell : Omaha, Neb.,	Pre L. 100,	359 Emerson P
Daniel, Suzanne Margaret : Los Angeles,	Hist. 54,	1 Alvarado
[1]Danielson, Arthur F. : Astoria, Ore.,	Geol. 5,	Cardinal Club
[2]Darrow, Constance : Lewistown, Mont.,	Lat †	1 Alvarado
Darsie, Marvin Lloyd : Palo Alto, B. S., Hiram College, 1908.	Educ. gr.,	265 Channing P
Darsie, William Pettigrew : Palo Alto,	Econ. 42,	Phi Kappa Psi
Davidson, Olive Marion : Colma,	Hist. 90,	1 Alvarado
Davis, Alexander : Pomona,	Pre L. 57,	Theta Delta Chi
Davis, Charles H. : Manchester, Conn., A. B., Yale University, 1909.	Geol. gr.,	Manzanita P

Davis, Harry Bascom : Pomona,	C. E. 77,	Theta Delta Chi
Davis, John Allen : Los Angeles,	Pre L. 112,	Delta Kappa Eps.
Davis, Julian Ralph : Pomona,	Pre L. 14,	Theta Delta Chi
Davis, Paul Judson : Willows,	Grk. 49,	730 Hamilton P
[2]Davis, Robert Stephens : Los Angeles,	Econ.,	Zeta Psi
[1]Davis, Sheldon Bacon : Stockton,	Span. 78,	30 Encina
Dawson, Don : Los Angeles,	Econ. 9,	Beta Theta Pi
[1]Dawson, H. Ward : Los Angeles,	Hist. 15,	Beta Theta Pi
Day, Carl Edwin : Watsonville,	Pre L. 50,	155 Encina
[2]Decius, Harold Wesley : Los Angeles,	Phyl.,	Zeta Psi
Decius, Louis Courtney : Los Angeles,	Geol. 47,	Zeta Psi
Denham, Charles M. : Arroyo Grande,	C. E. 39,	91 Encina
Dennis, Dede Irma : Phoenix, Ariz.	Econ. 108,	22 Roble
[2]Dent, Leslie Ferdinand : Winthrop,	Econ.,	Beta Theta Pi
Dickinson, Perry Yaple : Stockton,	C. E. 107,	93 Encina
[2]Dickover, Grace Lora : Santa Barbara,	Graph.,	17 Salvatierra
Dietrich, Waldemar Fenn : San Francisco,	Geol. 91,	59 Encina
Dimon, Asa Cyrus : San Jose,	Econ. 43,	Delta Tau Delta
Dingle, Charles Oscar : Woodland,	C. E. 107,	Alpha Tau Omega
Dodd, John McKee : San Francisco,	Chem. 41,	405 Emerson P
Dodge, George Sinclair : Los Angeles,	Econ. 9,	97 Encina
Dodge, Walter Jennings : Los Angeles,	E. E. 81,	97 Encina
[1]Doheny, Edward L. Jr. : Los Angeles,	Geol. 1,	Beta Theta Pi
Dole, Kenneth Llewellyn : Riverside,	Phyl.-Med. 135,,	80 Encina
Don-Carlos, Jessica : Prescott, Iowa,	Engl. 106,	Kappa Kappa Ga.
[1]Donovan, Augustine Michael, San Jose,	Law sp. 58,	Chi Psi
Dool, Donald George : Calexico,	C. E. 9,	2 Lasuen
Dooling, Charles Wagner : Hollister, A. B., Santa Clara College, 1910.	Pre L. † 21,	180 Encina
Dooling, Maurice Timothy Jr. : Hollister, A. B., Stanford, 1912.	Law gr.,	180 Encina
Downing, Russell Forrest : Los Gatos,	Pre L. 12,	184 Encina
Downing, Samuel Robert : Arcata, A. B., Stanford, 1907.	Med. gr.,	2327 Sac., S.F.S
Doxsee, Wilbur Harvey : Redwood City,	C. E. 100,	Redwood R
Draper, Roscal Leroy : Arroyo Grande,	Phyl. 68,	58 Encina
Driscoll, Marjorie Charles : Pasadena,	Engl. 77,	50 Roble
Dubendorf, John Hayes : Palo Alto,	M. E. † 10,	801 Waverley P
Duernberger, Frank Roscoe : Sunnyvale,	Pre L. 15,	Sunnyvale S
Duff, James Leo : Menlo Park,	Graph. 73,	Menlo Park
Duffin, Charles Greenlaw, Camas, Wash.,	E. E. 67,	19 Lasuen

Dunham, Bertram Ray : Corona,	Chem. 45,	359 Emerson P
Dunham, Cornelius Thos. : Salem, Mass.,	Law sp. 47,	Phi Kappa Psi
Dunipace, Gertrude Hilda : Morgan Hill,	Germ. 89,	9 Cabrillo
Dunlap, Carol J. : Hanford, A. B., Stanford, 1912.	Lat. gr.,	55 Roble
Dunlop, Florence Edetha : Vale, Ore.,	Phyl. 75,	22 Lasuen
Dunn, Teresa Pauline : Monrovia,	Hist. 45,	Madrono
Dunnagan, Jesse Philips : San Jose,	C. E. 34,	4 Lasuen
Dunphy, Nicholas Reed : Campbell,	Graph. 10,	4 Lasuen
Duren, Frances Mae : Bakersfield, A. B., Stanford, 1912.	Hist. gr.,	324 Emerson P
Durgin, Eva Lillian : Cupertino,	Educ. 10,	Cupertino C
Durgin, Rubie Mae : Cupertino,	Phyl. 37,	Cupertino C
[1]Durst, Ethel Helen : Sunnyvale, A. B., Stanford, 1912.	Math. 120,	Sunnyvale S
Durst, Harold Douglass : Sunnyvale,	Law sp. 30,	Stanford Inn
Duryea, Margaret : Palo Alto,	Graph. 13,	308 Lincoln P
Duryea, Robert Francis : Palo Alto,	C. E. 79,	Delta Upsilon
Dutton, Earl Treff : Los Angeles,	Hist. 11,	1a Alvarado
Dyer, Thomas Lafayette : Alva, Okla.,	Pre L. 65,	199 Encina
Easler, James Marcellus T. : Los Angeles,	E. E. 135,	454 Homer P
Eastey, Julia Mildred : San Jose,	Hist. 76,	2 Madrono
Eaton, Alma Martha : Salinas,	Frn. 7,	Alpha Omicron Pi
[1]Eby, Erwin Eldon : Los Angeles,	E. E. † 10,	845 Waverley P
Edwards, Alfred Rice : Palo Alto,	Pre L. 28,	Phi Delta Theta
Edwards, Noel Condiff : Los Angeles,	Pre L. † 12,	359 Emerson P
[2]Edwards, Roy Pierce : Wallace, Ida.,	Phys.,	4 Lasuen
Ehrenclou, Alfred Hjalmar : Redlands,	Phyl. 45,	706 Cowper P
[2]Egbert, Dorothy Barnes : Oakland,	Graph.,	1 Alvarado
Eliel, Paul : Pasadena,	Econ. 71,	Delta Upsilon
Ellias, Laura Lillian : Tropico,	Engl. 40,	340 Embarcadero P
Ellis, Lona Evelyn : Pacific Grove,	Graph. 46,	Mariposa
Ellsaesser, Fred : Braymer, Mo.,	Chem. 104,	235 Emerson P
Elsey, Howard McKee : Modesto,	Chem. 59,	185 Encina
Emerson, Arthur W. : Honolulu, T. H.,	Graph. 32,	16 Salvatierra
Emerson, Ralph Hettrick : Spokane, Wn.,	C. E. 99,	Sigma Nu
Emery, Rose Frances : San Jose,	Educ. 43,	40 Roble
Emmons, Marjorie Florence : Alameda,	Hist. 49,	Kappa Kappa Ga.
Enderle, Maurice Frank : Santa Ana,	Pre L. 103,	7 Encina
Endersby, Victor Arthur : Ukiah,	C. E. 6,	College Terrace
Endres, Herman : Los Angeles,	E. E. 113,	156 Encina

Engelhard, Edith Goebel : Los Angeles,	Germ. 108,	Gamma Phi Beta
Erb, Arthur Leslie : Chemainus, B. C.,	Pre L.13,	Sigma Alpha Epsil.
Erb, Benjamin Edw. : Chemainus, B. C.,	Geol. 64,	Sigma Alpha Epsil.
Erwin, Lewis Brown : Muskegon, Mich.,	E. E. 52,	167 Encina
Esaki, Ko : Berkeley,	E. E. 12,	Japanese Club
Escobar, Pedro J. : San Salvador, C. A.,	Pre L. 23,	Theta Delta Chi
Estes, Frances : Los Angeles,	Germ. 41,	Pi Beta Phi
Eustace, Marie Genevieve : Pacific Grove,	Germ. 49,	Madrono
Evans, David Lloyd Jr. : Malad City, Ida.,	E. E. gr.,	20 Encina
A. B., University of Utah, 1911.		
Evans, Helen Elizabeth : Mountain View,	Graph. 45,	16 Madrono
Evans, Irene M. : Mountain View,	Lat. 75,	16 Madrono
Evanson, Clayton Eugene, Spokane, Wn.,	Pre L. 11,	Cardinal Club
Everett, Eileen Erica : Orange,	Hist. 44,	Alpha Omicron Pi
Everly, Vera Leona : Nampa, Ida.	Engl. 50,	Mariposa
Everson, Susie May : San Francisco,	Germ. 13,	310 High P
[2]Eyer, Marguerite Knowlton : Los Angeles,	Hist. 77,	Alpha Phi
Fairclough, Katrine R. ; Stanford U.,	Hist. 49,	Kappa Alpha Theta
Falor, Richard Irvin : Eureka,	Pre L. 42,	82 Encina
Faris, Alvis Guy : Austin, Tex.,	Chem. 100,	1551 Emerson
Fassett, Weston Willard : Stockton,	Phys. 113,	11 Salvatierra
[1]Fatjo, António Antolin : Santa Clara,	Pre L. 49,	Santa Clara S
Faubel, Grace : San Francisco,	Hist. 80,	4 Madrono
Fawcett, Percy Douglas : Tacoma, Wash.,	Pre L. 92,	Theta Delta Chi
Fellows, Florence May : Los Angeles,	Hist. 108,	24 Roble
[1]Ferguson, Norris R. : Eureka,	M. E. 69,	130 Encina
Ferrel, Clyde Bruce : Walla Walla, Wn.,	E. E. sp. 14,	5 Lasuen
Fertig, Emmet Ross : Noblesville, Ind.,	Law gr.,	Phi Kappa Psi
A. B., University of California, 1910.		
Field, Andrew James : Los Altos,	E. E. 115,	162 Encina
Finch, Robert McMaster : Los Angeles,	Psych. 38,	Chi Psi
Finney, Florella Kelso : Modesto,	Phys. 46,	21 Madrono
Finney, Wallace Rolland : Modesto,	M. E. 98,	9 Encina
Fisk, Mary : Green Bay, Wis.,	Zool. 100,	Delta Gamma
Flack, Augustus Sloan : Los Angeles,	Pre L. 12,	Delta Chi
Flatau, Elsa : Los Angeles,	Germ. 39,	Alpha Om. Pi
Fleming, Clarence Edwin : Los Angeles,	Pre. L. 74,	39 Encina
Fletcher, William Daly : Stanford Univ.,	C. E. 55,	54 Encina
[1]Flint, Arthur Percy : Stockton,	Pre L. 11,	Encina
[2]Flint, John Donovan : Palo Alto,	Geol.,	841 Bryant P
Flugel, Felix : Palo Alto,	Econ. 45,	1153 Cowper P

Flynn, Francis : North Platte, Nebr.,	E. E. 12,	5 Lasuen
Fogel, Moses Miller : Santa Monica,	Pre L. 100,	81 Encina
Foley, Margaret Inez : San Mateo,	Eng. 47,	460 Wis.av.S.Mat.S
Forbes, Frederick B. : Albuquerque, N. M.,	Geol. † 4,	11 Salvatierra
Forbes, James Hyde : Los Angeles,	Geol. 59,	Delta Upsilon
Forbes, William Boomer : Los Angeles,	Pre L. 9,	Delta Upsilon
Ford, Edwin Hopkins : Minneapolis, Minn.,	Engl. 37,	Kappa Alpha
[1]Ford, Elizabeth E. : Minneapolis, Minn., A. B., Stanford, 1912.	Engl. 128,	8 Madrono
Fore, Harry Adolph : Campbell,	E. E. 62,	Encina
de Forest, Clara Marie : Palo Alto,	Germ. 13,	950 Univ. P
Fortune, Pearl Blanche : Palo Alto, A. B., Stanford, 1911.	Lat. gr.,	930 Scott P
Foster, Frederick Leland : Corona,	Pre L. 62,	142 Encina
Foster, George Leroy : Tacoma, Wash.,	Pre L. 70,	182 Encina
Foster, Marjorie Greene : San Rafael,	Chem. 52,	17 Madrono
Foulke, Charles Leslie : Rialto,	C. E. 37,	169 Encina
Fowler, Alice Belle : Paso Robles, A. B., Stanford, 1910.	Engl. gr.,	30 Roble
[2]Fowler, Frederick Hall : Palo Alto, A. B., Stanford, 1905.	C. E. gr.,	221 Kingsley P
Fowler, Harry C. : Paso Robles,	C. E. 9,	841 Bryant
Fox, Philip Benton : Redwood City,	Geol. 106,	Redwood R
Franceschi, Franco Emanuel : S. Barbara,	C. E. 24,	132 Encina
Frank, Alvin H. : Los Angeles,	Hist. 67,	64 Encina
[1]Frank, Stuart Hall : New York City, N.Y.,	Chem. 20,	19 Lasuen
Frary, Gladys May : San Diego,	Educ. 41,	Delta Delta Delta
French, Annie Cordelia : San Jose,	Hist. 38,	Kappa Kappa Ga.
French, Norman DuGard : Thomson, Ill.,	Pre. L. 99,	Sigma Chi
French, Olive Naomi : Huron, S. Dakota,	Chem. 29,	Mariposa
Freuler, Beatrice Elizabeth : Berkeley,	Psych. 56,	Alpha Om. Pi
[1]Friedrick, Pauline : San Diego, A. B., Stanford, 1912.	Graph. 120,	Delta Gamma
[2]Frost, Albert A. : San Diego,	Econ. 106,	Encina
Frost, Marion LeRoy : Redlands,	Pre L.,	Delta Chi
Fulkerson, Charles Merrill : Xenia, Ohio, A. B., Stanford, 1911.	Chem. gr.,	2 Lasuen
Funsten, Betty Glover : San Francisco,	Hist. 42,	Kappa Kappa Gam.
Fyfe, Andrew Douglas : Oceanside,	Geol. 61,	Delta Upsilon
[1]Gabine, Bernhard : Zurich, Switzerland,	Phil. 4,	275 Hamilton P
Gamble, Florence : Hanford,	Graph. 42,	Pi Beta Phi

Gamble, Launcelot John : Palo Alto,	M. E. 35,	1431 Waverley
Gard, Frank Jacob : Glendora,	Chem. 45,	Phi Gamma Delta
Gard, Mary Carolyn : Glendora,	Hist. 13,	Alpha Phi
Gardner, Sydine Aileen : Orange,	Math. 70,	19 Madrono
[2]Garfias, Valentine R., Mexico City, Mex., A. B., Stanford, 1907.	Geol. gr.,	Encina
[1]Garner, Aubrey Hamilton : Astoria, Ore., A. B., Stanford, 1912.	Geol. 127,	Encina
Garst, Delta Avis : Riverside,	Hist. 108,	Delta Delta Delta
[2]Garver, Jean Juliette : Des Moines, Ia.,	Germ. †	727 Bryant
Gassaway, Gordon : Los Angeles,	Eng. 87,	Kappa Alpha
Gates, Florence Mabel : So. Pasadena,	Frn. 12,	Kappa Kappa Ga.
Gates, Fred Herbert : So. Pasadena,	Hist. 15,	Phi Gamma Delta
Gault, Frank Sumny : Los Angeles,	Chem. 34,	37 Encina
[1]Geary, William Finlaw : Santa Rosa,	Pre L. 66,	Kappa Alpha
Gehrmann, Wm. Conrad : Davenport, Ia.,	Geol. 110,	Burlingame B
[1]Geissler, Edward Parsons : Los Angeles,	Pre L. 31,	Zeta Psi
Geohegan, Helen : Pasadena, A. B., Stanford, 1911.	Engl. gr.,	26 Roble
[1]George, Harrison Paul : San Diego, A. B., Stanford, 1912.	C. E. 120,	76 Encina
Geppert, Ralph Clinton : Vermillion, S. D.,	E. E. 52,	216 Emerson P
Gerwin, Vera Marian : Redwood City,	Hist. 35,	Redwood City R
Gibb, James Albert : Aiea, Hawaii,	M. E. 12,	Phi Kappa Psi
Gibbel, Naum Winfield : Carthage, Mo.,	M. E. 6,	351 Homer P
Gibson, Eric L. : Kew-Melbourne, Aus.,	C. E. † 13,	245 Ramona
Gilbert, Carl Hughes : Palo Alto,	Pre L. 73,	22 Encina
[1]Gilbert, Hazel Jeanette : Pasadena,	Germ. 104,	Gamma Phi Beta
Gilbert, Mildred Louise : Sausalito,	Engl. 58,	Gamma Phi Beta
Gilchrist, Margaret Josephine : San Jose,	Engl. 39,	Kappa Kappa Ga.
Gilfillan, Sermet William : Los Angeles,	Econ. 45,	Delta Tau Delta
Gill, Emma Gladys : Palo Alto,	Educ. 106,	400 Pope P
Gill, Gerald Forbes : Palo Alto,	C. E. 9,	400 Pope P
[1]Gilmore, Ralph Rensselaer : Fair Oaks,	E. E. 66,	Alpha Tau Omega
Gingerick, Marjorie : N. Manchester, Ind., A. B., University of Indiana, 1907.	Math. gr.,	Pi Beta Phi
Girdner, Margaret Virinda : Pacific Grove,	Hist. 12,	Mariposa
Glass, William Winslow : Pasadena,	C. E. 42,	Theta Delta Chi
Gleason, Rutherford Erwin : Palo Alto,	Math. 39,	251½ Emerson P
Gleiss, Frank Julius : Los Angeles,	E. E. 80,	147 Encina
Glendenning, Roy James : Santa Clara, A. B., Stanford, 1911.	Law gr.,	Santa Clara S

Gober, Helen Porter : Los Gatos, Germ. 69, Kappa Kappa Ga.
Goddard, Win Rawdon : Conneaut, Ohio, Chem. 58, 305 Emerson P
Good, Roy Milton : Marshalltown, Ia., Econ. 32, Cardinal Club
Goodan, Roger : Los Angeles, Hist. 67, 128 Encina
Goode, Stanley Edward : Los Angeles, Pre L. 98, Alpha Tau Omega
Goodrich, Elizabeth Ely : San Jose, Med. gr., 2038 Devisa., S.F.S
A. B., Vassar College, 1907.
Goodwin, Clarence Bernard : Sunnyvale, C. E. 113, Sunnyvale S.
Goodwin, William John : Sunnyvale, C. E. 75, Sunnyvale S.
Goplerud, Clifford Peter : Osage, Ia., C. E. 42, Kappa Alpha
Gower, Frances Anna : Los Angeles, Lat. 79, 51 Roble
Grace, Charles Stewart : Rivera, C. E. 103, 121 Encina
Gragg, Alden Orville : San Luis Obispo, Econ. 58, Theta Delta Chi
[2]Graham, Frances Boswell : Pomona, Hist. † Kappa Alpha Theta
Graham, Katherine Prewitt : Pomona, Eng. 109, Kappa Alpha Theta
[1]Graham, Marguerite : Riverside, Educ. 96, Delta Gamma
Graham, Wallace Belmont : Ottumwa, Ia., Econ. 106, Delta Kappa Eps.
Grant, Aaron George : Palo Alto, Educ. gr., 1037 Ramona P
A. B., University of Kansas, 1896; A. M., 1897.
Grau, Fritz Seymour : Sacramento, Econ. 11, Sigma Nu
[2]Graves, John Maddux : San Francisco, Phyl., Chi Psi
Graves, Olin Wright : Bostonia, Math. 13, 832 Kipling P
[2]Gray, Agnes Kendrick : Palo Alto, Rom. L., 430 Kingsley P
[1]Graybiel, William Napier : Chico, Law sp. 2, 561 Middlefield P
Green, Alison : San Mateo, E. E. 5, San Mateo S
Green, Boynton Morris : Redlands, M. E. 44, 96 Encina
Green, Carol Mary : Pasadena, Econ. 51, Kappa Alpha Theta
Green, Charles Havens : Petaluma, E. E. 82, 49 Encina
Green, Hazel Elizabeth : Stanford Univ., Econ. 57, 13 Salvatierra
Green, Karl : Enid, Okla., Engl. 70, Cardinal Club
Green, Sidney Sherwood : Long Beach, Pre. L. 47, Delta Chi
[1]Green, Warren Preston : Preston, E. E. 147, 139 Encina
A. B., Stanford, 1912.
[1]Greenfield, Lieurena Cole : St. Helena, Engl. 96, 44 Roble
Greenwood, Mabel : Princeton, Ill., Germ. 76, 355 Kellogg P
Gregg, John Price : Portland, Ore., Pre L. 75, Cardinal Club
Gregory, Alfred Craven : Suisun, C. E. 27, Beta Theta Pi
Grepe, John Stanley Jr. : E. Highlands, C. E. 83, Sigma Nu
Griffin, Roscoe Wadsworth : Vallejo, Pre L. 91, 145 Encina
Grotophorst, Waldo Edward : Santa Clara, Ent. 48, Santa Clara S
Grove, Mabel Lewis : Palo Alto, Hist. 39, 363 Melville P

Grundy, Edith Florence : Los Angeles, A. B., Stanford, 1911.	Lat. gr.,	28 Madrono
Guerena, Frank Louis : Sonora, A. B., Stanford, 1911.	Law. gr.,	105 Encina
Gulling, Grace Eleanor : Greenville,	Graph. 64,	640 Homer P
Gunnell, Dorothy P. : Salt Lake City, U.,	Span. 43,	19 Madrono
[1]Guthrie, Anna Nason : San Diego; A. B., Stanford, 1911.	Educ. gr.,	Pi Beta Phi
Guthrie, Esther Lee : Woodland,	Hist. 12,	65 Roble
Guthrie, Stanley Walter : Los Angeles,	Pre L. 67,	Delta Upsilon
[2]de Haas, Jacob Anton : Los Altos, A. B., Stanford, 1910; A. M., Harvard, 1911.	Econ. gr.,	Los Altos L
Hackett, Harold Arthur : Flagstaff, Ariz.,	M. E. 60,	Villa de Lagunita
[2]Hagen, Milton Abel : Los Angeles,	Econ.,	16 Salvatierra
Hager, John Manfred : Los Angeles,	Pre L. 15,	359 Emerson
Hagerman, Alfred : Los Angeles,	Hist. 45,	Beta Theta Pi
Haggart, Gilbert Edmund : Durango, Colo.,	Phyl. 11,	4 Lasuen
Hagman, George Lewis : Louisville, Ky.,	Phyl. gr.,	446 Hamilton P
[1]Hahn, Brayton Campbell : Burlingame,	Pre L. 11,	Burlingame B
[2]Haig, Florence Bertha : San Gabriel, A. B., Stanford, 1911.	Germ. gr.,	42 Roble
Haight, Marjorie Buell : Alameda,	Hist. 32,	17 Madrono
Hails, Alan Walter : Santa Barbara,	M. E. 14,	Phi Delta Theta
Hails, Raymond Richard : Santa Barbara,	Econ. 87,	Phi Delta Theta
Hakes, Bryant Burdett: Coronado,	Pre L. 40,	Delta Tau Delta
Halcombe, Norman M. : S. Francisco,	C. E. sp. 88,	111 Encina
[1]Haley, Samuel Milton : San Francisco,	Pre L. 2,	Kappa Sigma
Hall, A. Juillard : Pasadena,	Econ. 72,	Delta Tau Delta
Hall, Elwin Benoni : Los Angeles,	Geol. 36,	Beta Theta Pi
Hall, Jessie Mary : Alameda,	Hist. 63,	Delta Gamma
[1]Hall, Lillian Mary : Los Gatos,	Graph. 12,	333 Waverley P
Hall, Mortimer Louis : Pasadena,	Geol. 125,	Alpha Tau Omega
Hahn, Arthur Gainsford : Phoenix, Ariz.,	Econ. 52,	Delta Upsilon
Hamilton, Frederick C. : Cranford, N. J.,	Engl. 13,	11 Salvatierra
Hamilton, Jo Dimon : Auburn,	Phyl. 36,	Cardinal Club
Hamilton, Robert Cecil : Pasadena, A. B., Stanford, 1912.	Hist. gr.,	158 Encina
Hammon, Wendell C. : San Francisco,	Geol. 52,	Phi Delta Theta
[2]Hammond, Walter J. : Grinnell, Ia., B. S., Iowa College, 1911.	E. E. gr.,	359 Emerson P
Hammond, Clarence Bray : Palo Alto,	Engl. 106,	636 Webster P

Hanawalt, Frank Barrett Jr. : Los Angeles, Econ. 79, Alpha Tau Omega
Hanley, Katharine Gertrude : Los Angeles, Econ. gr., 21 Lasuen
A. B., Stanford, 1911.
[2]Hanna, Amy Margaret : Pasadena, Engl., Kappa Alpha Theta
[1]Hannibal, Harold Briggs : San Jose, Geol. 87, 60 Encina
Haraguchi, Tomiichi : Nagasaki, Japan, E. E. 76, Japanese Club
Harbaugh, Ross Wallace : Palo Alto, Med. gr., 2124 Cali. S.F.S.
A. B., Stanford, 1909.
Harding, Edwin Reginald : Palo Alto, Chem. 84, 281Everett P
Harding, Hal Calvin : Los Angeles, Pre L. 58, Alpha Tau Omega
[1]Hardy, Conrad Palmer : Oroville, C. E. 12, 144 Encina
Hardy, Olive : Oroville, Math. 59, 515 University P
Haresnape, Leo : Los Angeles, C. E. 7, 195 Encina
Harlow, Bessie Pauline : Bremerton, Wn., Engl. 40, Alpha Phi
Harrier, Alice Miriam : Palo Alto, Engl. 40, 1400 Waverley P
Harrigan, John Hand : Los Angeles, E. E. 41, Beta Theta Pi
Harrigan, Philip Frederick : Los Angeles, E. E. 20, Beta Theta Pi
Hart, Alberta Lucille : Albany, Ore., Phyl. 66, 2 Roble
[1]Hartley, Roland English Jr. : S. Francisco, Econ. 47, Theta Delta Chi
Hartsock, John Doke : Woodland, Pre L. 7, 441 Waverley P
Hartwell, Marian Lila : Santa Barbara, Hist. 45, 8 Roble
Haskett, William Blair : Pasadena, Pre L. 12, Alpha Tau Omega
Haslett, Roberta : Alameda, Frn. 105, Kappa K. Gamma
Haslett, Samuel M. Jr. : Alameda, Econ. 100, Beta Theta Pi
Hastings, Warren : San Jose, E. E. 47, Chap. & Em. S. J.
Hatfield, George Juan : Oakland, Law. gr., 608 Kingsley P
A. B., Stanford, 1911.
Haub, Alma Anita : Santa Rosa, Phys. 47, 15 Roble
[1]Hauck, John Edgar : San Jose, C. E. 18, 423 S 9th St. S.J.S.
Hauschild, George Wm. : New York, N. Y., Germ. gr., Mayfield
A. B., Northwestern University, 1900.
Hawes, Ben Merrill : Santa Cruz, Chem. 99, 173 Encina
Hawkins, Sam Miller : Watsonville, Econ. sp. 5, 131 Encina
Hawley, George W. : Portland, Ore., C. E. 81, 54 Encina
Hayes, Casey Hewitt : Lemon Grove, Pre L. 88, Phi Gamma Delta
Hayes, Francis William : Cupertino, Geol. 21, Cupertino C
[1]Hayes, Harold Cecil : Edenvale, Econ. 25, Delta Tau Delta
[1]Hayes, Harriet : Palo Alto, Engl. 120, 9 Roble
A. B., Stanford, 1912.
Hayes, Jesse Ernest : Campbell, C. E. 46, 33 Encina
Hayes, Lyetta Adelia : Edenvale, Hist. 32, Gamma Phi Beta

Hayward, Ida Rickard : Campbell, A. B., Stanford, 1911.	Zool. gr.,	53 Roble
Hazzard, Helen Greta : Whittier,	Span. 45,	Delta Gamma
Heald, Elmer Wilson : Palo Alto,	Pre L. 107,	558 Hawthorne P
[2]Heald, Ethel Grace : Palo Alto,	Germ. 55,	558 Hawthorne P
Heath, John : Palo Alto,	Hist. † 21,	1005 Bryant P
Hebert, Joseph Walter : San Jose,	Pre L. 103,	338 N 2d S.J.S.
Heflinger, Grace Katherine : Pasadena, A. B., Stanford, 1911.	Graph. gr.,	39 Roble
[1]Heilbron, Andrew Stevenson : Sacramento,	Hist.,	Delta Kappa Epsilon
[1]Hellmann, Richard Hoge : Redwood City,	Pre L. 122,	Kappa Alpha
Helmick, Grace Raymond : Helena, Mont.,	App. Math. 75,	Gamma P. B.
Hempl, Elsa : Stanford University,	Germ. 45,	8 Cabrillo
[2]Hempl, Hilda : Stanford University,	Zool. 56,	8 Cabrillo
Henderson, Cecilia : Santa Paula,	Lat. 41,	10 Salvatierra
Henderson, Edward : Santa Paula,	Pre L. 17,	Cardinal Club
Henderson, Hugh Murphy : Saybrook, Ill.,	M. E. 28,	330 Ramona P
Henderson, Inez Virginia : Stockton,	Econ. 45,	Alpha Phi
Henderson, James William : Eureka,	Pre L. 102,	Sigma Alpha Ep.
Henning, Marbry Thurber : El Paso, Tex.,	Math. 46,	Alpha Phi
Henningsen, Kathleen G. : Glenbrook, Nev.,	Zool. 47,	Delta Delta Delta
Henshaw, Marshall Brooke : Downey,	Pre L. 92,	Theta Delta Chi
Herring, John Lehman : Long Beach,	C. E. 10,	19 Lasuen
Herron, Laura Elizabeth : Palo Alto,	Educ. 46,	105 Emerson P
Herron, Mary Louise : Palo Alto,	Hist. 110,	105 Emerson P
Heynemann, George : San Francisco,	Pre L. 14,	25 Encina
[2]Hickman, Carleton Manville : Sacramento,	Econ.,	Delta Tau Delta
Higgins, Archibald Wm. : Hockley, Eng.,	E. E. sp. 58,	601 Melville P
[1]Higgins, James Edwin : Alameda,	Econ. 118,	Kappa Sigma
Higgins, Preston Leroy : Cupertino,	Pre L. 10,	Cupertino C
Higgins, Sydney Marshall : Los Angeles,	Hist. 62,	Beta Theta Pi
High, Helen Elisabeth : So. Pasadena, A. B., Stanford, 1911.	Phys. gr.,	45 Roble
[2]Hill, Clarence Sylvester : Parma, Ida.,	Pre L. 43,	11 Salvatierra
Hill, Laurance Landreth : Hollywood,	Econ. 107,	56 Encina
Hill, Marion Squire : Arlington, Mass., A. B., Wellesley College, 1911.	Chem. gr.,	900 University P
Hillard, Barrymore N. : Spokane, Wn.,,	Pre L. 16,	Cardinal Club
[1]Hilmer, Hermann : Palo Alto, A. B., University of Michigan, 1904;	Germ. gr., A. M., Columbia, 1905.	151 Cowper P
Hilton, Frank Howard : Portland, Ore., A. B., Stanford, 1911.	Law gr.,	Delta Chi

Hind, Oswald Arthur : Kohala, Hawaii,	Hist. 13,	Phi Kappa Psi
Hindle, Dorothy Marian : Del Mar,	Math. 79,	67 Roble
[2]Hinds, Joel Henry : Porterville,	E. E.,	2 Lasuen
Hirasawa, Teru Hico : San Francisco,	C. E. 2,	Japanese Club
Hitchcock, Ruth Howe : Santa Barbara,	Germ. 13,	6 Roble
Hjelm, Lillian Elizabeth : Los Angeles,	Hist. 76,	Delta Delta Delta
Ho, Nai Shing : Canton, China,	Econ. sp. 8,	833 Emerson P
Hocking, Adeline : San Jose,	Educ. gr.,	577 Univ. S.J.S.
A. B., Stanford, 1911.		
Hoernig, Ottilie K. : Mountain View,	Germ. 12,	Mt. View M
Hoffman, Henry Ray : Los Angeles,	Econ. 47,	193 Encina
[1]Hoffman, Jacob Harry : Tacoma, Wash.,	Pre L. 12,	19 Lasuen
[1]Hoffman, John Roy : South Pasadena,	M. E. 29,	Phi Delta Theta
[1]Hogle, Calvin : Palo Alto,	Chem. sp. 7,	431 Univ. P
Hoisholt, George Greiersen : Oakdale,	Hist. 34,	18 Encina
Holbrook, Lettie DeVoe : Portland, Ore.,	Hist. 57,	324 Emerson P
Holcomb, Grant : San Bernardino,	Law gr.,	Delta Chi
A. B., Stanford, 1911.		
Holden, Henry A. : Ticonderoga, N. Y.,	Geol. 13,	561 Middlefield P
Holditch, George Edward : Orange,	E. E. 84,	100 Encina
Holeman, George Stevenson : Riverside,	Phyl. 87,	7 Encina
[1]Hollensteiner, Arno G. : Missoula, Mont.,	Pre L. 120,	54 Encina
A. B., Stanford, 1912.		
[1]Hollmann, Emil Frederic : San Jose,	Educ. gr.,	56 Encina
A. B., Stanford, 1911.		
[1]Holman, Clarence Ladd : Ellis, Kan.,	E. E. †,	147 Emerson P
[1]Holme, Charles Louis : Mayfield,	Bot.,	Mayfield P
Holmes, Alma : Los Angeles,	Psych. 104,	Madrono
Holt, Inezetta : Redding,	Hist. 34,	16 Roble
[1]Holzaepfel, Norman R. : Sandusky, O.,	Geol. †	Pine Cottage
Hook, Bertha Louise : San Bernardino,	Germ. gr.,	56 Roble
A. B., Stanford, 1912.		
Hook, Joseph Stanley : Perris,	Geol. gr.,	Encina
A. B., Stanford, 1910.		
[2]Hopwood, Clyde Charles : Palo Alto,	C. E.,	342 Homer P
Hopwood, Margaret Bradfield : Riverside,	Educ. 68,	1 Alvarado
Horine, George Leslie : Palo Alto,	Econ. 37,	270 Kellogg P
Horine, Theo. Marguerite : Palo Alto,	Germ. 40,	270 Kellogg P
Horiuchi, S. : Yamanashi Ken, Japan,	E. E. 48,	131 Cowper
Horn, John Stephen : Palo Alto,	Chem. gr.,	555 Lytton P
B. S., University of Nevada, 1911.		

[1]Horne, Walter W. : Los Angeles,	Pre L. †,	Sigma Nu
Horton, Helen Clifford : Pasadena,	Germ. 62,	23 Roble
Hostettler, Burdette Lord : Erie, Pa.	M. E. sp. 103,	Acacia
Houghton, Harry Sumner : Santa Cruz,	M. E. 66,	Kappa Sigma
Houser, John David : Sacramento,	Educ. gr.,	66 Encina
A. B., Stanford, 1911.		
Howard, Grenville Gates : Stanford Univ.,	Hist. 54,	12 Dolores
Howard Vivian Mildred : Palo Alto,	Engl. 45,	222 Byron P
Howe, Avery John : Palo Alto,	Pre L. 12,	871 Channing P
Howe, Mollie Margaret : Chicago, Ill.,	Lat. 58,	527 Emerson P
Howell, Isabel Grant : Evanston, Ill.,	Graph. 65,	Delta Delta Delta
Howell John Wesley : Los Angeles,	Pre L. 102,	Beta Theta Pi
Howes, John Gaylord : El Centro,	Hist. 47,	219 Ramona P
Howes, Roy Francis : El Centro,	Hist. gr.,	219 Ramona P
A. B., Clark University, 1910.		
Hoyt, Frances Morey : Los Angeles,	Engl. 104,	10 Salvatierra
Hubbard, Herbert Lincoln : Redlands,	Econ. 107,	Phi Delta Theta
Hudson, Elmer Franklin : San Jose,	C. E. 40,	Theta Delta Chi
Hudson, Frederick Ross : Watsonville,	Econ. 75,	Encina
Hughes, Harold Arthur : Dorchester, Mass.	Psych. † 9,	46 Encina
Hughes, John E. : Tucson, Ariz.,	E. E. 6,	406 Ramona P
Hulburt, George Perry : Hollywood,	E. E. 88,	Cardinal Club
Hulsman, Evelyn Clara : Susanville,	Engl. 101,	750 Bryant P
Hulsman, Ivan M. : Susanville,	Geol. 9,	750 Bryant P
Hunley, John Berdell : Newton, Wash.,	Geol. 40,	40 Encina
Hunt, George Walter : San Jose,	C. E. sp. 89,	71 Encina
Hunt, Marcie Fannie : Corona,	Graph. 13,	Delta Delta Delta
Huntington, Frances : Los Altos,	Econ. 11,	Los Altos L
Hurd, Helen Josephine : Los Angeles,	Engl. 44,	3 Madrono
Hurd, Joseph D. : Salt Lake City, Utah,	Pre L. 71,	96 Encina
[1]Hurlbut, Lola : Tonopah, Nev.,	Engl. 20,	10 Salvatierra
Hurley, Morris Elmer : Albion	Germ. 15,	310 High P
Hutchinson, Edith May : Los Angeles,	Hist. 67,	Gamma Phi Beta
Hutchinson, George : Minneapolis, Minn.	Chem. 8,	Cardinal Club
[2]Hutchinson, Katharine : Palo Alto,	Germ.,	403 Kingsley P
Hutchinson, Ruth : Los Angeles,	Hist. 96,	Gamma Phi Beta
Hutchinson William N. L. : Palo Alto,	Bot. 9,	Phi Kappa Psi
Hutton, S. Miller : San Francisco,	Law gr.,	431 Kipling P
A. B., Princeton University, 1902.		
Hyatt, Edward, Jr. : Sacramento,	C. E. 120,	116 Encina
Hyatt, Shirley : Sacramento,	Phys. gr.,	222 Kingsley P
A. B., Stanford, 1906; A. M., 1908.		

Hyndman, Elizabeth : Wyoming, Ohio,	Engl. 76,	Delta Delta Delta
Ichihashi, Shizuko : Sapporo, Japan,	Bot. 13,	352 Hanover M
Ingelow, George Carpenter : Banning	Hist. sp. 60,	153 Encina
Ingraham Irving I. : Bristol Conn.	Hist. sp. 64,	Delta Kappa Ep.
Inslee, Edward H. : Niagara Falls, N. Y.,	Phys. sp. 10,	318 Lytton P
Ireland Edith McCoy : Los Angeles,	Hist. 76,	Gamma Phi Beta
Isakson, Carl Oscar : Portland, Ore.,	C. E. 47,	44 Encina
Jack, Julian Riette : Glendale,	C. E. 68,	Theta Delta Chi
Jackson, Edgar Alden : Cupertino,	E. E. 77,	Cupertino C
Jackson, Edna LaVone : Boise, Ida.,	Engl. 58,	Delta Delta Delta
Jackson, Ethel May : Rutherford, N. J.,	Graph. 63,	Mariposa
[2]Jackson, Lawrence Burch : New York C.,	Engl. 96,	Cardinal Club
Jacob, Lina Stella : Palo Alto,	Germ. 46,	801 Middlefield P
Jacobs, Charles Louis : San Jose,	Educ. gr.,	High Sch. S.J.S.
Columbia University.		
Jacomini, Gustave Adolph : Pasadena,	M. E. 14,	135 Encina
Jameson, Bernice : Corona,	Chem. 43,	56 Roble
Jameson, Eloise : Corona,	Chem. gr.,	53 Roble
A. B., Stanford, 1910.		
Jameson, Irene Evelyn : San Diego,	Hist. 46,	Mariposa
Jameson, William Henry, Jr. : Corona,	Econ. 16,	197 Encina
Jeffers, James Sterling : Los Angeles,	C. E. 9,	Delta Upsilon
[1]Jenkins, Alice Mabel : Stanford Univ.,	Phyl. gr.,	3 Lasuen
A. B., Stanford, 1911.		
Jenkins, Leonard R. : Ogden, Utah,	Phyl. 74,	Encina
Jenkins, Olaf P. : Stanford University,	Geol. 60,	3 Lasuen
Job, Martha Judith : Mt. View,	Engl. 14,	Mt. View M
Johnson, Carrie Jetté : Pacific Grove,	Hist., gr.	437 Kipling P
A. B., Stanford, 1912.		
Johnson, Charles R. : San Francisco,	C. E. 56,	166 Encina
Johnson, Frances Mary : San Jose,	Engl. 42,	447 No. 2nd S.J.S
Johnson, Frederick M. : San Francisco,	Hist. 94,	Beta Theta Pi
Johnson, J. Sidney : Marshaltown, Ia.,	Econ. 82,	Cardinal Club
Johnson, Rowland Bryant : Redlands,	M. E. 45,	171 Encina
Johnson, Walter Harold : San Jose,	C. E. 120,	658 Stockton S.J.S
Johnston, Carl Edward : Los Altos,	Ent. 101,	Los Altos
Johnston, Faber Laine : San Jose,	Pre L. 54,	Sigma Alpha Ep.
Johnston, Petra Beatrice : Redwood City,	Germ. 52,	Redwood City R
Johnston, Walter Foster : Everett, Wash.,	Pre L. 69,	245 Ramona
[1]Jolivette, Hally Delilia M. : Lacrosse, Wis.,	Bot. gr.,	1 Alvarado
A. B., Univ. of Wisconsin, 1906; A. M., 1909; Ph. D., Stanford, 1912.		

Jones, Dorette : Seattle, Wash.,	Germ. 44,	Gamma Phi Beta
[2]Jones, James Walter : La Porte,	Educ. 73,	Acacia
Jones, John Joseph : Santa Clara,	Pre L. 93,	Santa Clara S
A. B., Santa Clara College, 1908.		
Jones, Louis Hollister : Pasadena,	Bot. 115,	Phi Kappa Psi
Jones, Perry Thomas : San Bernardino,	Pre L. 6,	Sigma Chi
Jones, Robert Alton : Burlington, Vt.,	Med. gr.,	Kipling and Univ.
A. B., Stanford, 1908.		
Jordan, Guy Wilfred : Colton,	Chem. 72,	Encina
de Journel, Robert : Burlingame,	Pre L. 28,	Phi Gamma Delta
[1]Jouvenat, Victor F. : Lincoln, Neb.,	Hist.,	Phi Kappa Psi
Judah, Marion S. : Los Angeles,	Germ. 84,	Alpha Phi
Junge, Marie Elizabeth : Big Spring, Neb.,	Phyl.-Med. 103,	62 Roble
Kauffman, Harlan Brice : Chicago, Ill.,	Econ. 105,	Delta Kappa Ep.
Kauffman, Karl Ferris : Los Angeles,	E. E. 32,	Delta Kappa Ep.
Kay, Edwin William : San Jose,	Chem. 16,	683 S. 2nd S.J.S
Kay, Willard E., Jr. : Ogden, Utah,	Phyl.-Med. 106,	29 Encina
Kearns, Harold John : Oakland,	Pre L. 39,	Delta Kappa Ep.
Keefer, Chauncey T. : Los Angeles,	M. E. sp. 79,	109 Encina
Keesling, Louis A. : San Jose,	Pre L. 37,	Sigma Nu
Kelker, George D. : Glenwood Spgs., Colo.,	Phyl. 12,	718 Bryant P
Keller, Arnold : Portland, Ore.,	E. E. 25,	42 Encina
[1]Kelly, Lyman Ernest : Oakland,	Ent. †,	Delta Tau Delta
Kelly, Roy Willmarth : Hollister,	Educ. gr.,	Col. of Pac. S.J.S
A. B., College of Pacific, 1911.		
Kemp, Madge Rose : Sausalito,	Hist. 95,	Alpha Omicron Pi
[2]Kempkey, Edwin Karl : Piedmont,	Ent. sp.,	603 Waverley P
[1]Kennedy, Bessie E. : Tonopah, Nev.,	Engl. 30,	10 Salvatierra
Kennedy, Louis Rex : Orange,	C. E. 102,	Kappa Alpha
[2]Kennedy, Margaret Lucretia : Modesto,	Hist.,	573 University S. J. S.
Kennedy, Stanley C. : Honolulu, T. H.,	Econ. 97,	Phi Kappa Psi
Kenney, Pearl Madeline : Palo Alto,	Engl. 45,	226 University P
Kern, Eugene Francis : Berkeley,	Econ. 66,	Beta Theta Pi
Kerr, Luvenia : Dixon,	Eng. † 9,	5 Roble
Ketelsen, Carl : Tonopah, Nev.,	Geol. 33,	90 Encina
Keyston, Garton D. : San Francisco,	Econ. 106,	93 Encina
Kilcline, William Francis : San Mateo,	Pre L. 12,	108 Encina
Kile, Joseph Horton : Stockton,	Econ. 43,	192 Encina
Kilpatrick, Jennie Faye : San Martin,	Lat. 67,	30 Roble
[2]Kim, Frank Yongju : Chunju, Korea,	Econ. †,	Japanese Club
[2]Kimball, Dexter Simpson : Ithaca, N. Y.,	M. E. gr.,	Ithaca, N. Y.
A. B., Stanford, 1896.		

Kimball, Elena Sophia : Eureka,	Frn. 21,	63 Roble
Kimura, Minnie Ruth : Palo Alto,	Educ. 42,	917 Alma P
King, Alfred T. : San Luis Obispo,	Graph. 98,	Phi Delta Theta
King, Harriet Shulze : Banning, A. B., Stanford, 1910.	Anat. gr.,	38 Roble
King, Lyman Stevenson : Oakland,	M. E. 109,	Sigma Alpha Ep.
King, Marion Reginald : Porterville,	Phyl. 42,	909 Univ. P
Kingsbury, Jere Morrell : San Francisco,	C. E. 9,	Sigma Chi
[1]Kistler, Jessie Rua : Covina, A. B., Stanford, 1911; A. M., 1912.	Engl. gr.,	17 Salvatierra
Kistler, Ray Henry : Covina,	Phyl. 15,	190 Encina
Kistler, Roy Emanual : Covina,	E. E. 13,	190 Encina
Kitagawa, Kay Jiro : Kioto, Japan,	Phyl. 45,	1047 Ramona P
Knapp, Meredith Elizabeth : Azusa,	Hist. 47,	Madrono
Knight, Courtland Whitney : Pasadena,	Econ. 33,	Phi Gamma Delta
Knight, Earle : Chicago, Ill.,	Chem. 32,	Delta Upsilon
Knollin, Ernesto Ray : Auburn, N. Y.,	Educ. 63,	78 Encina
[2]Knox, Nellie D. : Palo Alto,	Hist. †,	751 Channing P
Kobayashi, Nobuyoshi : San Francisco,	E. E. 7,	Japanese Club
Koontz, John Andrew, Jr. : Palo Alto, A. B., Stanford, 1908.	E. E. gr.,	221 Bryant P
[1]Krause, Stella Josephine : San Diego, A. B., Stanford, 1911.	Lat. gr.,	Madrono
Kreps, Helen Katharine : Palo Alto,	Germ. 14,	1129 Emerson P
Kreps, Nora Elizabeth : Palo Alto,	Engl. 10,	1129 Emerson P
Kuder, Clyde S. : Boise, Idaho,	Geol. 10,	Cardinal Club
Kuhl, Carl Fleming : Stockton,	Econ. 10,	Sigma Nu
Kuhn, Susette : San Diego,	Germ. 56,	17 Salvatierra
[2]Kusunoki, Miyozo : Palo Alto,	Hist. sp. 30,	420 Everett P
[1]Lacey, Gladys Vivian : Salinas, A. B., Stanford, 1912.	Hist. 104,	Delta Delta Delta
Lacey, William Noble : San Diego, A. B., Stanford, 1911.	Chem. gr.,	Alpha Tau Om.
[1]Lacombe, George Leo : Menlo Park, Gr. St. Patrick's Seminary, 1910.	Hist.gr.,	Cath.Ch.MenloP,M
LaFetra, Gladys Adelaide : Los Angeles,	Econ. 2,	Alpha Phi
Lagerstedt, Albert : Gibbon, Minn., A. B., University of Minnesota, 1907.	Hist. gr.,	454 Hamilton P
Laird, William Aikin : Lindsay,	C. E. 78,	College Terrace
Lake, Harrison M. : San Francisco,	Educ. 91,	140 Encina
[1]Lake, Jarrett Townsend : Redlands,	E. E. 117,	20 Encina

Lambert, Lewis R. : Suisun Valley,	Law sp. 51,	11 Encina
Landers, Marjorie Ella : Bakersfield,	Germ. 46,	Mariposa
Lang, Louis Arthur : San Jose,	E. E. sp. 31,	91 Lenzen S.J.S
Lantz, Grover Berner : Colton,	Geol. 86,	76 Encina
Lantz, Marion Louise : Colton,	Germ. 13,	Pi Beta Phi
LaPeire, George Warren : Palo Alto,	Geol. 4,	436 Hamilton P
Larkin, Gail Carhart : Los Angeles,	Pre L. 112,	Delta Chi
Lasky, Bernard Harold : San Francisco,	Geol. 88,	89 Encina
Latshaw, Max : Duluth, Minn.,	Chem. 13,	845 Waverley P
Laughlin, Gerald Francis : Boise, Idaho,	Phyl. 17,	92 Encina
Laumeister, Emma Loveland : Palo Alto,	Phyl. 23,	Alpha Phi
Lawrence, George Louis : Modesto,	Span. 91;	Cardinal Club
Leach, Charles Nelson : San Francisco, A. B., Stanford, 1909.	Med. gr.,	2124 Califor. S.F.S
Leaf, Erle Mervin : San Jose, A. B., Stanford, 1910.	Law gr.,	Delta Chi
Lee, Gladys Margaret : Los Angeles,	Hist. 44,	Madrono
Lee, Wah Seyle : San Francisco,	C. E. † 6,	318 Emerson
[1]Legge, Frances Lynette : Pasadena, A. B., Stanford, 1911.	Math. gr.,	Kappa Alpha Th.
Lehr, Robert P. : San Jose,	Geol. 8,	725 So. 6 S.J.S
Leib, Earl Russell : San Jose,	Geol. 113,	Zeta Psi
Leib, Karl Elias : Spokane, Wash.,	Pre L. 46,	4 Lasuen
Lener, Kasper : San Jose,	Pre L. sp. 70,	S. Salv., S.J.S
[1]Lengfeld, Louis : San Francisco, A. B., Stanford, 1912.	Econ. 121	82 Encina
[2]Leonesio, Cleveland John : San Francisco,	Law sp.,	16 Salvatierra
Lever, Lewis Ferdinand : Redlands,	Pre L. 11,	Phi Gamma Delta
Levy, Karl Riffle : Los Angeles,	Pre L. 68,	22 Encina
Levy, Paul Mark : San Francisco,	Chem. 86,	30 Encina
Lewis, Charles Granville : Pacific Grove,	C. E. 106,	185 Encina
Lewis, Edna Branham : Pacific Grove,	Graph. 13,	Mariposa
Lewis, Lester W. Jr. : Seattle, Wash.,	Econ. 44,	Kappa Sigma
Lewis, Robert Strong : College Terrace, A. B., Stanford, 1905.	Geol. gr.,	College Terrace
Lewis, Walter Kinney : Riverside,	Pre L. 34,	69 Encina
Lewis, William David : Pittsburg, Pa.,	C. E. 41,	575 Lincoln P
[2]Libis, Ethel Melrose : Akron, O.,	Rom. L. †	38 Roble
[1]Lindauer, Samson A. : Deming, N. Mex., A. B., Stanford, 1910.	Law gr.,	Delta Chi
[1]Lindvall, Carl Emil : Rockford, Ill.,	Chem. † 15,	704 Bryant P

Ling, Homer John : Oakdale,	M. E. 10,	5 Lasuen
Lingo, Oscar Roy : Los Angeles,	Germ. sp. 34,	120 Encina
de la Llata, Roland : Mexico City, Mex.,	M. E. 6.	318 Emerson P
Lockwood, Marie E. : Pasadena,	Hist. 73,	Pi Beta Phi
Loel, Wayne Frederick : Saratoga,	E. E. 47,	102 Encina
Logan William Anthony : La Honda,	Pre L. 53,	Mt. View M
Long, Jean Ward : Los Angeles,	Hist. 35,	Delta Gamma
Long, Lydia : Hayward,	Hist. 60,	8 Madrono
Long, Mabel Jo : Boise, Idaho,	Germ. 75,	Delta Delta Delta
[1]Long, Royce Reed : Stanford University, A. B., Stanford, 1908.	Phyl. gr.,	11 Salvatierra
de Lorimier, Arthur John : San Diego,	Law sp. 9,	168 Encina
de Lorimier, George S. : Calgary, Can.,	Law sp. 11,	Encina
[2]Lorraine, Ruth Sayre : Paris, France,	Pre L.,	21 Lasuen
Lothrop, Margaret M. : Concord, Mass., A. B., Smith College, 1905.	Econ. gr.,	Kappa Alpha Th.
Lotz, Cyril Clyde : San Jose,	Pre L. 54	116 S. 9 San Jose
Loud, Henry Lawrence : Pomona,	Pre L. 75,	128 Encina
Lough, Herbert M. : Grand Junction, Col.,	Econ. 46,	148 Encina
Lovering, Gladys L. : Findlay, Ohio,	Hist. 68,	16 Roble
Low, Apau Paul : Honolulu, T. H.,	C. E. 58,	1037 Ramona
Lowman, Sheda Amy : Los Angeles,	Hist. 90,	Alpha Omicron Pi
[1]Lozano, Salvador : Mexico City, Mex.,	C. E. 5,	417 Emerson P
[2]Lucy, Harold : San Francisco,	Chem. sp.,	
Luis, Franklin Alfred : Salinas,	Geol. 41,	45 Encina
Luker, Benjamin F. : Proctor, Texas, A. B., Washington and Lee University, 1909; A. M., 1910.	Frn. gr.,	909 University P
Lull, Linford C. : Los Angeles,	E. E. 82,	Sigma Nu
[1]Lum, Tsai Yan : Hong Kong, China,	Chem. 11,	318 Emerson
Luscombe, Carl Blackwell : Carthage, Mo.,	E. E. 47,	Sigma Nu
Luther, Martin, Jr. : San Jose,	Econ. 46,	Sigma Alpha Ep.
Lutz, Katherine Barbara : Santa Ana,	Hist. † 13,	Kappa Alpha Th.
Lyman, George Byron : Yuba City,	Geol. 10,	481 Lytton P
Lynch, Windsor Chase : Boise, Idaho,	Econ. 14,	Cardinal Club
[1]Lyne, Henry Stephens : Melbourne, Aust.,	Geol. 110,	407 Waverley
[2]Mabie, Ralph Tyler : Los Angeles,	C. E. sp.,	Alpha Tau Omega
McCann, Eugene G. : Los Angeles, A. B., Stanford, 1911.	E. E. gr.,	159 Encina
[2]McCann, Robert James : Pacific Grove,	Geol. 81,	407 Waverley P
McCarthy, Francis J. : San Francisco, A. B., St. Mary's College, 1911.	Med. † 13,	329 Hawthorne P

McCarthy, Mary Louise : Honolulu, T. H.,	Engl. 105,	47 Roble
[2]McCarthy, Pearl Lydia : Honolulu, H. T.,	R. L.,	47 Roble
McCartney, Flora G. : Sioux Falls, S. D.,	Hist. 74,	931 Scott P
McChrystal, Arthur J. : Salt Lake City, Utah,	Geol. 8,	528 Waverley
MacClain, Warren Kenneth : Palo Alto,	M. E. 38,	317 High P
[2]McClatchy, Leo Anthony : Sacramento,	Engl.,	19 Lasuen
McCloskey, Paul Morton : Salada Beach,	Pre L. 10,	Delta Kappa Ep.
McClure, Frank Elwood : Los Angeles,	Econ. 10,	Beta Theta Pi
McClurg, Lena Marie : Los Angeles,	Graph. 66,	Pi Beta Phi
McClurg, Verner Blackmore : Los Angeles,	C. E. 9,	Phi Delta Theta
McConnel, Mary Emma : Palo Alto,	Econ. 70,	446 Palo Alto P
McConnell, Albert R. : Durango, Colo.,	Econ. 76,	Delta Tau Delta
McCord, Emily E. : Mayfield,	Engl. 16,	Evergreen Park P
McCorkle, Paul Clarendon : Escondido,	E. E. 70,	704 Bryant P
MacCormac, Josephine V. : Palo Alto, A. B., Stanford, 1912.	Grk. gr.,	Castilleja School P
McCormack, Charles F. : Spokane, Wash.,	C. E. 12,	11 Salvatierra
McCormack, May E. : Tacoma, Wash.,	Engl. 58,	22 Lasuen
McCoy, Margaret Lois : Los Angeles,	Engl. 13,	Gamma Phi Beta
[2]McCray, Lynn Morris : Los Angeles,	M. E.,	14 Lasuen
McCready, Harry Lewis : Palo Alto,	C. E. sp. 89,	633 Channing P
[2]McCreary, Laura May : Hanford,	Engl.,	10 Salvatierra
McCreary, Thomas M. : San Francisco,	Econ. 40,	Zeta Psi
McCudden, Katherine Ramona : Vallejo,	Hist. 10,	Kappa Kappa Gam.
McDaniel, Robert Levi : Ogden, Utah,	Econ. 60,	172 Encina
McDermott, Laura Irene : Los Altos,	Chem. 121,	Los Altos
McDermott, Ora Martina : Tucson, Ariz.,	Engl. 102,	Delta Delta Delta
Macdonald, Alexander S. : San Francisco,	C. E. 53,	152 Encina
McDonald, Clarence C. : Woodland,	Pre L. 107,	Delta Chi
McDonald, John Lewis : San Jose,	M. E. 40,	151 Encina
McGilvray, Walter S. : Stanford Univ.,	Chem. 117,	Escondito Cot.
McGonigle, Rose Vibiana : Los Angeles,	Hist. 47,	11 Roble
McGovern, Anna Louise : Palo Alto,	Hist. 102,	651 Channing P
McGuire, Hollister B. : Portland, Ore.,	Law sp. 38,	Sigma Chi
McInerny, James Edmund : Los Angeles,	Engl. 76,	Delta Tau Delta
McIntosh, Raymond D. : Duxbury, Mass.,	Law sp. 9,	19 Lasuen
[2]McKay, George E. : Ukiah,	C. E. 98,	71 Encina
McKee, Paul Boole : San Francisco,	E. E. 51,	Theta Delta Chi
[2]McKendry, Marion : Palo Alto,	Hist.,	1035 Bryant P
McKendry, Ramona : Palo Alto,	Hist. 54,	1035 Bryant P
McKenna, John Shore : Lemoore,	Geol. 12,	Mountain View M
Mackey, Florence G. : Los Angeles,	Graph. 9,	Gamma Phi Beta

[2]McKenzie, Kenneth Stuart : Santa Rosa,	Pre L. 92,	Delta Chi
McKinney, Verne Willson : Palo Alto,	C. E. 40,	620 Waverley P
McKnight, Harold Metcalf : Los Angeles,	Pre L. 56,	Delta Kappa Ep.
[1]McLachlan, Anita Jean : Los Angeles, A. B., Stanford, 1911.	Hist. gr.,	Kappa K. Gam.
MacLachlan, Marion Allison : Palo Alto,	Hist. 107,	630 Lincoln P
[2]McLaughlin, Charles Porter : Sacramento,	Pre L.,	Phi Delta Theta
[2]McLaughlin, Frances : Palo Alto,	Graph.,	1020 Bryant P
MacLean, Hester Rusk : Palo Alto,	Econ. sp. 137,	1499 Cowper P
McMillan, Hazel May : Fallbrook,	Hist. 74,	67 Roble
McMillan, Percy Walton : San Jose,	C. E. sp. 19,	Sigma Nu
McMillan, W. Bruce : San Jose, A. B., Stanford, 1911.	C. E. gr.,	Sigma Nu
McNabb, Mary Vera : San Bernardino,	Engl. 43,	Pi Beta Phi
McNair, Maurice Lloyd : Los Angeles,	Pre L. 15,	Phi Kappa Psi
McNair, Stuart Strathy : New York, N. Y.,	Geol. 99,	Mayfield
McNeely, Roland : Los Angeles,	Pre L. 63,	Kappa Sigma
McPheeters, George Carl H. : Palo Alto, A. B., Stanford, 1910.	Med. gr.,	2121 Buchan.,S.F.S
McPherron, Arnil Lilian : Hollywood,	Engl. 53,	20 Madrono
McPherson, Kenneth Rees : San Jose,	C. E. 6,	54 Settle S.J.S
[1]Macready, Henry Ashmore : Los Angeles,	Pre L. 79,	635 Bryant P
Macready, John Arthur : Los Angeles,	Econ. 92,	8 Encina
Macrum, Natalie : Los Altos,	Lat. 43,	Los Altos L
McSherry, Ralph Caylor : Dayton, Ohio,	Engl. 12,	11 Salvatierra
McWilliams, Charles Kirkton : San Jose,	Chem. 105,	502 S. 8 S. J. S
Mader, Constance Marie : Santa Rosa,	Germ. 44,	207 Hawthorne P
Madison, Christine : Hayward,	Math. 54,	Madrono
Mail, Mary Margaret : Los Angeles,	Engl. 12,	Madrono
[2]Maines, Harriette Elizabeth : Los Angeles,	Lat. 33,	Alpha Omicron Pi
[1]Maison, Charles Augustus : Los Angeles,	C. E. sp.,	433 Melville
Mallory, George Henry : Santa Rosa,	Bot. 44,	567 Lincoln P
Mallory, Nathaniel Wells : Santa Rosa,	Phyl. 63,	567 Lincoln P
Maloney, Agnes Clare : San Francisco,	Hist. 41,	Pi Beta Phi
[1]Maloney, Maud Alice : Butte, Mont.,	Graph. 62,	Pi Beta Phi
Maltaner, Frank : Cincinnati, Ohio,	Chem. 105,	1106 Bryant P
Mann, Leland S. : Arroyo Grande, A. B., Stanford, 1912.	Law gr.,	58 Encina
Manning, Edward Earle : Los Angeles,	Hist. 69,	Beta Theta Pi
Marble, Russell Price : Durango, Colo.,	Pre L. † 6,	339 Emerson P
Marcus, Louise : San Francisco,	Germ. 107,	17 Roble

Marich, William Daniel : Redding,	E. E. 52,	89 Encina
Marker, William Maxwell : La Mesa,	E. E. 53,	Encina
[2]Markley, Chandler Hamilton : San Jose,	C. E. 26,	420 S. 5th S. J.
Marshall, James G. : White Plains, N. C.,	Law sp. 34,	172 Encina
Marshall, Kenneth Irving : Los Angeles,	M. E. 79,	88 Encina
Marshall, Verna Mae : Los Angeles,	Graph. 100,	Pi Beta Phi
Marten, William Samuel : San Jose, B. S., Columbia University, 1905.	Ed. gr.,	275 S. 12 S.J.S
[1]Martin, Julia Mae : Post Falls, Ida.,	Engl. 91,	8 Roble
Martin, Thomas P. : Ballinger, Tex.,	Hist. 63,	142 Encina
Marx, Dorothy Grotecloss : Palo Alto, A. B., Stanford, 1911.	Engl. gr.,	357 Kingsley P
Marx, Roland Grotecloss : Palo Alto, A. B., Stanford, 1911.	C. E. gr.,	357 Kingsley P
Mason, Lewis Tracy : Santa Cruz,	Pre L. 12,	357 Fulton P
Mason, Ruth : Mountain View,	Bot. 105,	Mountain View M
Masters, Charles Ford : Sacramento,	Chem. 10,	92 Encina
Mathews, James Henry : Eureka,	Pre L. 45,	Encina
[2]Mathews, Margaret Mary : Eureka,	Rom. L.,	1 Alvarado
Mehrtens, Henry George : San Francisco, B. S., University of California, 1911.	Med.gr.,	2405 Pacific av,SFS
Melcon, Sisag Vahram : Kingsburg,	E. E. 120,	94 Encina
Melcon, Zenope Parnok : Kingsburg,	E. E. 117,	94 Encina
Merrill, Carlton Horne : Los Angeles,	Hist. 23,	Kappa Sigma
Merriman, Mary Augusta : Santa Barbara,	Engl. † 5,	22 Roble
Mersereau, Irene : Pasadena, A. B., Stanford, 1911.	Germ. gr.,	54 Roble
[1]Messer, Robert Walcott : Rockland, Me., A. B., Stanford, 1911.	Germ.gr.,	505EmbarcaderoP
Metz, Charles William : Sheridan, Wyo., B. S., Pomona College, 1911.	Zool. gr.,	196 Encina
Meyer, Alfred Falck : San Francisco,	Pre L. 13,	40 Encina
Meyerholz, Ivan Rheinier : Cupertino,	C. E. 57,	Cupertino C
Mickle, John Lloyd : Centerville,	Pre L. 37,	Sigma Nu
Miebach, Philip J. : Lethbridge, Alb., Can.,	Econ. 22,	202 Encina
Miller, Clifton McPherson : Santa Cruz,	Pre L. †,	Delta Tau Delta
Miller, Faye Ruth : Danville, Ill.,	Germ. 102,	Kappa Alpha Th.
[1]Miller, Frances Everding : Cupertino,	Graph. †,	Cupertino C
Miller, Gertrude Anna : Beatrice, Nebr.,	Germ. 104,	Delta Gamma
Miller, Gleed : San Francisco,	Pre L. 47,	132 Encina
[2]Miller, Guy Chester : Palo Alto,	Engl. 110,	475 Everett
Miller, James Andrew : San Francisco,	Pre L. 37,	Acacia

Miller, James Arthur : Palo Alto,	E. E. 81,	580 Addison P
Miller, John Owen : San Francisco,	C. E. 118,	134 Encina
Miller, John Paul : Chico,	Law sp. 33,	1106 Bryant P
Miller, Robert Patchen : Los Angeles,	C. E. 139,	Delta Tau Delta
Millett, George Wilber : Sunnyvale,	Phyl. 38,	Sunnyvale S
Mills, John Herman : Palo Alto,	Phyl. 106,	530 Lytton P
Mills, Sarah Matilda : National City,	Engl. gr.,	319 Guinda P
A. B., Stanford, 1911.		
Millsap, Robert Elmer : Pasadena,	C. E. 109,	156 Encina
Missner, Frank R. S. : San Francisco,	Phyl. 67,	176 Encina
Mitchel, Glen Henry : Los Angeles,	Pre L. 36,	Kappa Sigma
Mitchell, Edwin Harvey : Palo Alto,	E. E. sp. 14,	130 Fulton P
Mitchell, Merle Ellsworth : Santa Rosa,	Law gr.,	11 Encina
A. B., Stanford, 1912.		
Miwa, Tsurukichi : San Francisco,	E. E. sp. 15,	Japanese Club
Moffitt, George Wilber : Fonda, Ia.,	Phys. gr.,	603 Waverley P
A. B., University of Iowa, 1910.		
Moise, Nina Ethel : San Francisco,	Hist. 109,	15 Madrono
Monsch, David Frantz : Louisville, Ky.,	Lat. 31,	Ramona Bldg. P
Montague, Helene : Los Angeles,	Hist. 94,	Alpha Omicron Pi
Montague, Marjorie : Chicago, Ill.,	Engl. 86,	Delta Gamma
Montgomery, Como : Nashville, Tenn.,	Engl. gr.,	651 Waverley P
A. B., Stanford, 1911.		
[1]Montgomery, Wayne Warren : Simi,	Phyl. †,	Acacia
[1]Moore, Courtney L. : Monterey,	Law sp. 87,	Chi Psi
Moore, Julia Eugenia : Piedmont,	Frn. 93,	Pi Beta Phi
Moore, Neil Preston : Palo Alto,	Chem. 39,	564 Hamilton P
Moore, Virginia : Los Gatos,	Hist. 106,	Los Gatos L
Moore, William Homer : Selma,	Phyl. 13,	197 Encina
More, Edwin Reynolds : Tacoma, Wash.,	C. E. sp. 12,	182 Encina
[2]Moreno, Virginia : Memphis, Tenn.,	Rom. L.,	1235 Webster P
[1]Morgan, Gladys Myfanwy : San Diego,	Phyl. 120,	5 Madrono
A. B., Stanford, 1912.		
Morgan, Harold Sydney : San Diego,	Phyl.-Med. 111,	Phi Delt. Th.
Morgan, Harry Joseph : Los Angeles,	Chem. 40,	21 Encina
Morgan, Madeline B. : Santa Barbara,	Engl. 10,	22 Roble
Morgan, Ralph S. : Los Angeles,	Econ. 70,	Villa de Lagunita
Morin, Harriette Lucile : San Francisco,	Engl. 31,	20 Roble
[1]Morris, Eugene Francis : San Jose,	Pre L. †,	781 So. 1 S. J. S
A. B., Santa Clara College, 1910; A. M., 1911.		
Morris, James J. : Morristown, Tenn.,	Graph. 7,	24 Encina

[2]Morrison, Harold : Indianapolis, Ind.,	Ent. 65,	Encina
Morrison, Maurice E. : Morgan Hill,	C. E. 76,	College Terrace
Morrow, Osborn Belt : Portland, Ore.,	M. E. sp. 27,	Sigma Al. Ep.
Morse, Evelyn : Lodi,	Hist. 47,	Madrono
Morton, Frank Willard : San Francisco,	Pre L. 31,	707 Bryant P
[2]Mosher, Edgar DeWolfe Jr. : Palo Alto,	Pre L. 4,	675 Hamilton P
Mosher, Hugh Harold : San Jose,	Ch.74,	201 S.CrittendenS.J.S
Mullen, Homer Alfred : Jefferson, Ohio,	E. E. 117,	405 Waverley P
Mulock, Fred S. : San Gabriel,	E. E. 12,	359 Emerson P
Munger, Arthur H. : San Francisco,	Med. gr.,	1942 Web'r S.F.S.
A. B., Stanford, 1910.		
Murphey, Elizabeth Ella : Tucson, Ariz.,	Hist. 116,	Delta Delta Delta
[2]Murray, George Harvey : Hanford,	Pre L. 12,	Sigma Nu
Murray, Hamilton : Bakersfield,	Engl. 103,	Cardinal Club
Murray, Robert Lindley : Palo Alto,	Chem. 80,	1019 Bryant P
Murray, Virginia : Kern,	Phyl. † 11,	Kappa Alpha Th.
[1]Murray, Welwood Gourlay : Omaha, Neb.,	Pre L. † 31,	Delta Chi
[1]Myers, Neva Marguerite : Los Angeles,	Germ. †,	9 Santa Ynez
Myers, Ralph Cather : Bakersfield,	C. E. 39,	57 Encina
Nagel, Else Helen : Palo Alto,	Phyl. 12,	356 Addison P
Nagel, Helen May : Stanford Univ.,	Chem. gr.,	Castilleja School
A. B., Stanford, 1911.		
Nagel, Minna Ivy : Palo Alto,	Hist. 48,	Madrono
Nakamura, Yuichi : Yamaguchi, Japan,	E. E. 49,	29 Salvatierra
Nakayama, Shonosuke : Tokio, Japan,	Ent. 44,	la Alvarado
Nam, Ong Yet : San Francisco,	E. E. sp. 6,	318 Emerson
Narver, David Lee : Los Angeles,	C. E. 61,	Sigma Alpha Ep.
Neal, Helen : Belmont,	Hist. 91,	Kappa Kappa Gam.
[2]Neal, Roland : San Jose,	Chem. gr.,	8 Villa Ave S.J.S.
A. B., Cornell College, 1904; A. M., 1907.		
Needham, Guy Evan : Tracy,	Engl. 77,	141 Encina
Neel, Beula Jane : Ventura,	Bot. 42,	Kappa Alpha Theta
Neill, Ernest : San Mateo,	E. E. 8,	313 Waverley
Nelson, Ernest Bruce : San Jose,	Graph. 83,	Kappa Alpha
Nelson, Hans Christian : Fields Landing,	Law gr.,	107 Encina
A. B., Stanford, 1910.		
Nemecheck, Rudolph J. : Los Angeles,	C. E. 123,	219 Ramona P
Nesbitt, Chetanna Maude : Vallejo,	Hist. 88,	Alpha Omicron Pi
[1]Newcomer, Erval Jackson : Palo Alto,	Ent. gr.,	1015 Forest Ct. P
A. B., Stanford, 1911.		
Newcomer, Mabel : Palo Alto,	Econ. 77,	Madrono

Newkirk, Mary Alada : Bisbee, Ariz.,	Span. 107,	44 Roble
Newman, Eva May : Mountain View,	Lat. 14,	Mountain View M
Newman, Margaret Elizabeth : Santa Barb.,	Engl. 43,	8 Roble
Newman, Ollis Willard : Santa Barbara,	Bot. 72,	24 Encina
Newman, Rea Cambridge : Santa Barbara,	E. E. 79,	49 Encina
Newman, Willard Hodges : San Diego,	Hist. 95,	Delta Chi
Newton, Douglass Erle : Woodbridge,	Hist. 113,	121 Encina
Nichols, C. Fenton : San Francisco,	Pre L. 71,	145 Encina
Nichols, Viola Beatrice : Pasadena,	Bot. 101,	26 Roble
Niebel, Herbert Lee : Cleveland, Ohio,	C. E. 43,	Phi Kappa Psi
Niepp, Frederick Antone : Ukiah,	E. E. 12,	540 Kingsley P
Nixon, Carey H. : Onawa, Iowa,	M. E. 12,	Delta Tau Delta
Noble, Ralph M. : Galesburg, Ill.,	Math † 36,	Phi Delta Theta
Nobs, Walter Rudolf : Redwood City,	Geol. 71,	Redwood City R
Nomura, Hanji : Kobe, Japan,	Engl. 58,	1125 Ramona
Norberg, Elwin Paul : Pasadena,	C. E. 8,	431 Univ. P
[2]North, Frances : Cupertino,	Engl. 29,	Cupertino C
Norton, Bertha F. : Rock Creek, Idaho,	Hist. 15,	Mariposa
Nowell, Patterson Dana : Tulare,	Pre L. 78,	3 Encina
Null, George Wallace : San Jose,	C. E. 49,	102 Encina
Nunan, Cyril Raymond : Stockton,	Hist. 110,	Phi Delta Theta
Nusbaum, Emanuel Rodes : Colton,	Gr. † 8,	542 Cowper P
[1]Oakford, Leon Martin : Bakersfield,	E. E. † 11,	19 Lasuen
Obear, Maurice : St. Louis, Mo.,	C. E. sp. 62,	Beta Theta Pi
Ober, Florence Sophia : Palo Alto,	Hist. 75,	727 Bryant P
O'Brien, Ruth Hayes : San Mateo,	Engl. 8,	San Mateo S
Obrikat, Edward Robert : Alhambra,	C. E. 13,	253 Homer P
O'Connell, Francis A. : Mountain View,	Pre L. 17,	Mt. View M
Odenheimer, Frances J. : Los Angeles,	Germ. 45,	15 Roble Hall
Officer, Elizabeth Logan : Ocean Park,	Engl. gr.,	Pi Beta Phi
A. B., Stanford, 1907.		
Ogden, Laurence A. : Bakersfield,	E. E. 14,	Phi Delta Theta
Oliver, Jean Redman : Chico,	Med. gr.,	2327 Sac'to S.F.S.
A. B., Stanford, 1911.		
Oliver, Myron Angelo : Monterey,	Graph. 13,	22 Alvarado
Olmsted, Frank O. : Los Angeles,	E. E. 11,	Delta Upsilon
Olmsted, Roger Wolcott : Los Angeles,	C. E. 82,	67 Encina
Olsen, Harry : Palo Alto,	C. E. 12,	321 Fulton P
Olsen, John : Palo Alto,	Graph. 15,	321 Fulton P
Olsen, Louis : Palo Alto,	C. E. 47,	321 Fulton P
O'Neill, Mervyn John : Belmont,	Econ. 43,	Belmont B

Oppenheimer, Leon I. : Spokane, Wash.,	Phyl. 73,	194 Encina
Organ, William Robert : Palo Alto,	E. E. 10,	454 Forest P
Orr, Florence J. : San Francisco,	Hist. 90,	Kappa Kappa Gam.
Oshima, Sho : Naokichi, Japan,	Phil. 75,	Bryant & Tenny. P
Ostenberg, Zeno : San Jose,	Chem. 86,	140 Encina
Ostrander, Justus Marvin : Palo Alto,	Econ. 7,	332 Channing P
Otis, Arthur Sinton : Pasadena,	Educ. gr.,	202 Encina
A. B., Stanford, 1910.		
[1]Otto, Lucile Elizabeth : Belmont,	Germ. gr.,	Belmont B
A. B., Stanford, 1909.		
Ouderkirk, William R. : Honolulu, T. H.,	Pre L. 13,	Phi Kappa Psi
[2]Overaker, Louise : St. Helena,	Econ.,	44 Roble
[2]Overman, Helen Doris : Santa Barbara,	Bot.,	58 Roble
Overman, Ruth : Santa Barbara,	Graph. 100,	58 Roble
Owen, Ethel : Los Gatos,	Phyl. 50,	63 Roble
[1]Owen, Henry Dorrance : Stockton,	C. E. 121,	Sigma Chi
A. B., Stanford, 1912.		
Owens, William Brownlee : San Jose,	Pre L. 44,	Delta Chi
[2]Oyen, Ariadne Minerva : Everett, Wash.,	Germ.,	59 Roble
Oyen, Scipio Aristotle : Everett, Wash.,	Econ. 7,	5 Lasuen
[1]Ozier, Stanley Nelson : Los Angeles,	Econ. 28,	Sigma Chi
[1]Packard, Henry Jessup : Ontario,	Geol. gr.,	Encina
A. B., Stanford, 1911.		
Paine, John Howard : Palo Alto,	Ent. 107,	505 Homer P
Paine, Russell : Redlands,	Anat. gr.,	815 Kipling P
A. B., Stanford, 1911.		
Palmer, Frank E. : Ellensburg, Wash.,	Pre L. 39,	Theta Delta Chi
Park, Carl Joseph : Palo Alto,	Educ. 76,	51 Encina
Park, Charles V. : Kidder, Mo.,	Econ. gr.,	142 Encina
A. B., Stanford, 1909.		
Parker, Elsie May : Santa Ana,	Hist. 104,	Kappa Alpha Th.
Parker, Thomas Harry : San Francisco,	E. E. sp. 34,	154 Encina
Parkinson, Mary Dorothy : Los Angeles,	Germ. 102,	Alpha Phi
Parkinson, Mary : Los Angeles,	Hist. 12,	Delta Gamma
Parkinson, Robert R. : Palo Alto,	Bot. 11,	1101 University P
Parmelee, Harvey W. : Santa Barbara,	Geol. 98,	110 Encina
[2]Parsons, Maurice Giesy : Los Angeles,	C. E. gr.,	Encina
A. B., Stanford, 1911.		
Partridge, John Frederick : San Rafael,	C. E. 102,	Sigma Alpha Ep.
Pasaol, Joseph Marion : Mountain View,	C. E. 5,	Mountain View M
Patterson, Lee : Portland, Ore.,	Geol. 50,	Chi Psi

Patterson, William Herbert : Mayfield, A. B., Stanford, 1910.	Law gr.,	Palo Alto P
Paul, Arthur Samuel : Ely, Nev.,	Econ. 11	358 Homer P
Paul, Chester Francis : Ely, Nev.,	Engl. 69,	358 Homer P
Paulson, John Edwin : Davenport, Ia.,	Phyl. † 14,	704 Bryant P
[2]Payne, Alan Edward : Morgan Hill,	C. E. sp.,	77 Encina
[1]Peabody, Clarence Carlyn : Ontario,	Chem. 44,	Sigma Chi
Peake, Alonzo William : Los Angeles,	Geol. 99,	157 Encina
Pearson, William Rodney : Los Angeles,	Pre L. 10,	Alpha Tau Omega
Peck, Edward Lawrence : Pasadena,	M. E. sp. 76,	135 Encina
Peck, Gladys Amiel : Pasadena, A. B., Stanford, 1911.	Lat. gr.,	656 Bryant P
Peck, Sedley Clarendale : Compton,	Econ. 86,	Sigma Chi
[1]Peckham, Arthur Bixio : San Jose, A. B., Stanford, 1912.	Geol. 135,	74 N. 12 S.J.S
Peckham, Ignatius Martin : San Jose, A. B., Stanford, 1911.	Law gr.,	74 N. 12 S.J.S
Peers, George Alexander : Mayfield,	E. E. 11,	Mayfield M
Pellas, Silvius Frederick : New York, N.Y.,	Geol. 47,	Phi Kappa Psi
[2]Pelton, George Seeley : Pasadena,	Law sp.,	25 Salvatierra
Pelton, Herbert Edmun : Pasadena,	E. E. 118,	25 Salvatierra
Perham, Philip D.-B. : Palo Alto,	Grk. 15,	335 Melville P
Perkins, Charles Timothy : Alameda,	Bot. 28,	23 Encina
Perkins, Rollin Morris : Lawrence, Kans., A. B., University of Kansas, 1910.	Law gr.,	21 Salvatierra
Perry, Altha : Kingman, Ariz.,	Pre L. 12,	22 Lasuen
Peters, Jerome Deveraux : San Jose, A. B., Santa Clara College, 1908; A. M., 1909.	Pre L. 122,	Delta Upsilon
Petersen, Walter Edward : Santa Barbara,	E. E. 67,	154 Encina
Pettit, Albert Victor : Hoquiam, Wash.,	C. E. 10,	359 Emerson P
Pettit, Fred Eugene : Peabody, Kans., A. B., University of Kansas, 1911.	Law gr.,	Phi Kappa Psi
Phares, John French : Santa Rosa,	Bot. 11,	Kappa Alpha
Philippi, John Fred : Los Angeles,	Geol. 9,	Delta Kappa Epsilon
Phillips, Alfred Liles : Santa Cruz,	Chem. 74,	Delta Tau Delta
Phillips, Raymond M. : Los Angeles,	Pre L. 45,	430 Kipling P
[2]Phillips, Wendell Keigh : Portland, Ore.,	Pre L.,	5 Lasuen
Pickering, Loring C. : San Francisco,	Engl. 93,	1098 Emerson P
Pier, Paul Albert : Palo Alto,	Pre L. 48,	Delta Chi
Pingree, Louis William : Ogden, Utah,	Chem. 114,	161 Encina
Pinkerton, Rachel Pearl : Pacific Grove,	Frn. 8,	Gamma Phi Beta
Piper, Will Bruce : Prescott, Ariz.,	C. E. 36,	179 Encina

Plummer, Edna : San Jose,	Math. 50,	546 S. 2 S.J.S
Plunkett, William, Jr. : Roswell, N. Mex.,	Econ. 2,	431 Univ. P
Poindexter, Emily Virginia : Los Gatos,	Lat. 15,	Alpha Omicron Pi
Polk, Mary Aline : Palo Alto,	Phyl. 12,	576 Lincoln P
Pollock, Ralph Carleton : Palo Alto, A. B., Stanford, 1906.	Chem. gr.,	1140 Bryant P
Polson, George W. : Menlo Park,	E. E. 83,	Menlo Park M
Pomeroy, Frank Kenneth : Palo Alto, A. B., Stanford, 1912.	Med. gr.,	2121 Buch'n S.F.S.
Porter, Durham W. : Washington, D. C.,	C. E. 35,	431 University P
[1]Porterfield, Wilson C. : Silver City, N. M.,	Pre L. 45,	177 Encina
[1]Post, Fred Dan : Rockford, Ill.,	Chem. 107,	191 Encina
[1]Post, Henry Bolton : Palo Alto,	C. E. 70,	1112 Ramona P
Post, Morgie Adelia : Monrovia,	Hist. 75,	Alpha Phi
Postma, George Ezinha : Los Angeles,	Chem. 104,	16 Salvatierra
[2]Potter, Harold Edward : San Francisco,	Econ. sp.,	Delta Kappa Eps.
Power, Harry H. : Spokane, Wash.,	Chem. 13,	Cardinal Club
Pratt, Evelyn R. A. : Bostonia,	Engl. 70,	23 Roble
Pratt, Francis Sitwell : Ontario	Chem. 81,	178 Encina
Pratt, Mabel Deborah : Milwaukee, Wis., Ph. B., University of Wisconsin, 1904.	Hist. gr.,	13 Roble
Preisker, William Henry : Palo Alto,	Chem. 62,	581 Forest P
[1]Price, Berdella : Santa Cruz, A. B., Stanford, 1907.	Lat. gr.,	531 Cowper P
Price, Francis : Santa Barbara,	Pre L. 72,	840 Kipling P
Price, John Bertsch, Jr. : Hazleton, Pa.,	Hist. 10,	Phi Kappa Psi
Price, Longueville Howe : Palo Alto,	Econ. 69,	602 Webster P
Price, Merton James : San Francisco,	Phyl. 70,	Phi Delta Theta
Price, Ruth : San Diego,	Hist. 57,	Roble
[2]Prince, Ferd, Jr. : Orange,	Econ. 108,	173 Encina
Prout, Florence : Palo Alto,	Frn. 9,	26 Madrono
[1]Prout, Franklin Stanton : Palo Alto, A. B., Stanford, 1912.	Geol. 151,	117 Greenwood P
Pruett, Harry Jeroam : Pomona,	Bot. 102,	Kappa Alpha
[2]Pruett, John Floyd : Pomona, A. B., Stanford, 1909.	Med. gr.,	San Francisco
Pugh, Edmund Wright : Los Angeles,	Law gr.,	Delta Chi
Pung, William S.-C. : Honolulu, T. H.,	C. E. sp. 46,	318 Emerson
Purdum, Ernest Reynolds : Eagle Rock, A. B., Stanford, 1910.	Law gr.,	549 Cowper P
Putcamp, Fanny Elizabeth : Oakley,	Germ. 73,	10 Roble

Pyle, Kenneth : Gilroy,	E. E. 68,	103 Encina
[2]Radcliffe, Emily Hannah : Los Angeles,	Lat. gr.,	243 Cowper P
A. B., Stanford, 1910; A. M., 1911.		
Raines, Herbert : Campbell,	E. E. 117,	46 Encina
Ramsay, Harold H. : Palo Alto,	Engl. 10,	251 Webster P
Ramsey, Alice Emily : Stanford Univ.,	Hist. 40,	20 Lasuen
[1]Rand, Chester : Los Angeles,	C. E. sp. 44,	College Terrace
[2]Rankin, Fanny Belle : Petaluma,	Hist. 89,	Madrono
Rankin, Maurice John : Santa Clara,	Law sp. 13,	183 Encina
Rannells, William Morgan : Reno, Nev.,	Pre L. 65,	170 Encina
Rayburn, Donald W. : Los Angeles,	Hist. 87,	129 Encina
Rea, Elizabeth Tully : Gilroy,	Econ. gr.,	21 Lasuen
A. B., Stanford, 1911.		
Rea, James Harrold : Gilroy,	M. E. 59,	Chi Psi
[1]Reed, Chassie Francis : San Diego,	Graph. gr.,	25 Madrono
A. B., Stanford, 1911.		
[1]Reed, Gerald Walter : Portland, Ore.,	Hist. 1,	Kappa Sigma
[1]Reed, Hazel Kimball : San Diego,	Engl. gr.,	Madrono
A. B., Stanford, 1911.		
[1]Reed, Howard Saxton : Colton,	Pre L. 55,	Theta Delta Chi
[1]Reene, Jane Elinor : San Francisco,	Engl. gr.,	2260 Vallejo S.F.S
A. B., Stanford, 1911.		
Reese, Joseph D. : Redding,	Pre L 40,	4 Lasuen
Reeve, Ingalls I. : San Jose,	Econ. 75,	Delta Chi
Reeve, Stanley M. : Denver, Colo.,	Engl. sp. 42,	647 Lytton P
[1]Reeves, Frank Wixom : San Bernardino,	C. E. 45,	Sigma Nu
Rehm, Francis Edward : Sonora,	Econ. 15,	38 Encina
Reid, Herman Lincoln : Berkeley,	Chem. 43,	Chi Psi
Reineman, LeRoy Foerster : Pasadena,	Pre L. 10,	Sigma Nu
Reis, Clement Frank : Los Angeles,	Econ. 60,	36 Encina
Remington, Arthur E. : Watertown, N. Y.,	Geol. sp. 98,	451 Channing P
Reynolds, Florence E. : Upper Lake,	Hist. 76,	651 University P
Reynolds, John Lynn : Los Angeles,	M. E. 110,	110 Encina
Reynolds, Lloyd Robinson : Upper Lake,	Phyl. 14,	651 University P
Rhinehart, Willis Earl : San Diego,	Pre L. 12,	Phi Gamma Delta
Rible, Blanch : Sacramento,	Grk. gr.,	5 Salvatierra
A. B., Stanford, 1910; A. M., 1911.		
Richards, Ralph Edward : Hilo, H. T.,	E. E. 41,	Acacia
Richardson, Charles H., Jr. : Pasadena,	Zool. 105,	79 Encina
[1]Richardson, Eulalia : Palto Alto,	Phys. gr.,	1010 Bryant P
A. B., Stanford, 1910; A. M., 1911.		

Richardson, Walter Hamilton : S. Barbara,	C. E. 109,	104 Encina
Richdale, Jay Williard : Santa Barbara,	C. E. 35,	155 Encina
Rider, Louise : Watsonville,	Graph. 78,	22 Lasuen
Righter, George Lutes : Campbell, A. B., Stanford, 1912.	Hist. gr.,	33 Encina
Risling, Bertram August : Palo Alto,	Econ. 6,	935 Webster P
Rivers, Lilian Frances : Los Angeles,	Germ. 100,	22 Lasuen
[2]Robb, Charles Fremont : Los Angeles,	C. E. sp. 12,	Delta K. Epsil.
[2]Roberts, Frank Kittredge : Santa Cruz,	Econ. sp.,	Delta Tau Delta
Roberts, Richard Evan : Redlands,	Pre L. 36,	Phi Delta Theta
Robertson, Alfred W. : Santa Barbara,	Pre L. 120,	Phi Gamma Delt.
Robesky, Ethel Minerva : Bakersfield,	Phys. 52,	Mariposa
Robinson, Ada : Carson City, Nev.,	Germ. 107,	20 Roble
Robinson, Helen West : Burlingame,	Engl. 79,	Burlingame B
Robinson, Jere W. Jr. : Boise, Idaho,	Econ. 14,	359 Emerson P
Robinson, Landon McGee : Louisville, Ky.,	Engl. 85,	101 Encina
Robinson, Ralph Leonard : Fullerton,	E. E. 133,	405 Kipling
[2]Rockman, William Henry : Los Gatos,	Geol. 21,	Los Gatos L
Rodden, Mary Louise : Oakdale,	Engl. 46,	22 Lasuen
Rodig, Milton Theodore : El Cajon,	E. E. 11,	633 Channing P
Rohrback, Daniel W. : Watsonville,	M. E. 40,	37 Encina
[1]Rollins, Hamilton B., Jr. : Los Angeles,	Econ. 6,	Sigma Chi
Root, William Thomas, Jr. : Pasadena,	Educ. 104,	102 Encina
Rose, Phil Sheridan : Ashland, Ore.,	Pre L. 40,	531 Cowper P
Rosenthal, Florence B. : San Francisco,	Frn. 38,	Madrono
Ross, Donald Stamford : Los Angeles,	C. E. sp.,	Beta Theta Pi
[1]Ross, Ethel Mary : So. Pasadena, A. B., Stanford, 1912.	Engl. 122,	Roble
Ross, George Paul : Lakeview, Ore.,	Pre L. 46,	4 Encina
Ross, Stanley : Palo Alto,	E. E. 6,	561 Middlefield P
Ross, William Walter : Campbell,	E. E. 7,	Campbell C
Roth, Almon Edward, : Stanford Univ., A. B., Stanford, 1909.	Law gr.,	105 Encina
Roth, Earl Fredrick : Willits,	Phyl. 11,	38 Encina
Rouiller, Marcelle H. : Palo Alto,	Frn. 12,	431 Channing P
Rounds, Ralph Madison : Wichita, Kans.,	Hist. 74,	Phi Gamma Delta
Rowell, Isabel : San Jose,	Educ. 48,	52 Roble
Roxburgh, Eileen Margaret : Gilroy,	Engl. 79,	51 Roble
Runyan, Silas Mercer : Courtland,	Hist. 11,	Delta Kappa Ep.
Russell, Frank Marion : Pasadena,	Pre L. 103,	Delta Chi
Ryerson, Regina : San Francisco,	Hist. 104,	21 Lasuen

[1]Salbach, Lloyd F. : San Francisco,	C. E. 35,	4 Salvatierra
Sampson, Ruth Adele : San Diego, A. B., Stanford, 1912.	Engl. gr.,	31 Salvatierra
Sanborn, Augustus Mudge : Redlands,	M. E. 98,	Phi Delta Theta
Sanborn, Gertrude Elizabeth : Yuba City,	Hist. 104,	18 Roble
Sanborn, Morgan Allan : Benecia,	Pre L. 27,	359 Emerson P
Sanborn, Thomas : Redlands,	C. E. 108,	Phi Delta Theta
Sandstrom, Arthur C. : Portland, Ore.,	C. E. sp. 41,	53 Encina
Sanford, Burnett : Palo Alto,	Phys. 62,	Phi Kappa Psi
Sanford, Carrie Isabel : San Francisco,	Frn. 14,	Delta Delta Delta
Sauer, Clarence L. : San Luis Obispo,	M. E. 9,	4 Lasuen
Saylor, Evelyn Jane : Portland, Ore.,	Engl. 13,	Delta Delta Delta
Sayre, Marjorie A. : Tacoma, Wash.,	Hist. 57,	Alpha Omicron Pi
Schaaf, Clara Lydia : Ft. Wayne, Ind.,	Germ. 103,	326 Lytton P
Schaupp, Karl Ludwig : Santa Rosa,	Phyl. 94,	Phi Gamma Delta
Scheele, Norbert : Palo Alto,	Germ. 105,	481 Lytton P
Schellbach, Genevieve : San Jose,	Engl. 13,	508 So. 11 S.J.S
Schilling, Henry Joseph : San Jose,	C. E. 59,	536 So. 4 S.J.S
Schmidt, Justus J. : E. Las Vegas, N. M.,	Econ. † 9,	Chi Psi
Schnetzler, Stanley S. : Beaver Dam, Wis.,	Chem. 12,	Phi Delta Theta
[1]Schofield, Martha N. : Palo Alto,	Educ. 80,	730 Hamilton P
Scholefield, Crighton W. : Hollister, A. B., Stanford, 1911.	M. E. gr.,	Alpha Tau Omega
Scholl, Albert John : Los Angeles,	Chem. 77,	Kappa Sigma
Scholz, Herbert Joseph : Campbell,	E. E. 13,	Campbell C
Schuster, Richard Philip : Los Angeles,	Hist. 26,	64 Encina
Schuyler, Howard I. : New York, N. Y.,	Educ. 81,	78 Encina
Schwab, Erma B. : Los Angeles,	Hist. 105,	Madrono
Scofield, Frank Alson : Dunnigan,	Educ. 75,	51 Encina
Scott, Earl Theodore : Los Angeles,	C. E. 58,	186 Encina
Scull, Carolyn Beatrice : Palo Alto, A. B., Stanford, 1911.	Hist. gr.,	250 Lowell P
Sears, Harry Johnson : Palo Alto, A. B., Stanford, 1911.	Chem. gr.,	627 Gilman P
Seeley, Marjory : Los Gatos, A. B., Stanford, 1911.	Hist. gr.,	46 Roble
Seeley, Ruth : Los Gatos,	Chem. 89,	42 Roble
[1]Seidl, Muriel Russell : San Francisco,	Hist. 39,	17 Salvatierra
Semple, George Hallion : New York, N.Y.,	Lat. 76,	4 Lasuen
Sevier, Milton Williams : Eureka,	Geol. 21,	69 Encina
Seward, Richard Henry : Los Angeles,	Econ. 95,	Delta Upsilon

Seymour, Donald Irving : Sacramento,	M. E. 9,	Sigma Nu
[1]Shafer, Arthur J. : Los Angeles,	Geol. 2,	Beta Theta Pi
Sharp, Edward William : Chico,	C. E. 13,	523 Cowper P
Sharp, Sidney J. W. : Hanford,	Pre L. 39,	Encina
Shattuck, Charles Henry : Alameda,	M. E. 111,	Delta Kappa Ep.
[2]Shaul, Gilbert Lafayette, Jr. : San Diego,	Pre L. 12,	Phi Delta Theta
Shaw, Carl Raymond : Aspen, Colo.,	C. E. † 14,	635 Bryant P
Shaw, Franklin Edward : Palo Alto,	Pre L. 10,	Phi Gamma Delta
Shaw, Frances Lilian : Bakersfield,	Hist. 111,	17 Roble
Shaw, Ruth Edith : Cincinnati, Ohio,	Phil. 110,	Delta Delta Delta
Shaw, Sidney Burton : Campbell,	E. E. 114,	65 Encina
Shea, Timothy Thomas : San Francisco,	Med. † 9,	329 Hawthorne P
A. B., St. Mary's College, 1911.		
Sheldon, Jeremiah William : Gilroy,	Bot. 34,	57 Encina
[1]Sheldon, Josephine Wilmarth : Gilroy,	Germ. 124,	27 Roble
A. B., Stanford, 1912.		
Sheldon, Peryl Hazelle : Parker, S. D.,	Graph. 71,	Mariposa
Sheldon, Virgil Lee A. H. : Los Angeles,	Bot. 11,	Chi Psi
Shellenberger, Olive W. : Seattle, Wash.,	Engl. 113,	Pi Beta Phi
Shelton, James Errett : San Jose,	Law gr.,	Delta Chi
A. B., Stanford, 1910.		
Shelton, Ruth Casner : Los Angeles,	Hist. 10,	Pi Beta Phi
Sherer, Gail Genevieve : Redlands,	Graph. 40,	22 Lasuen
Sheridan, Grace : Santa Barbara,	Frn. 40,	26 Madrono
Sherman, Harold Meredith : Redlands,	Pre L. 104,	Delta Chi
Shoemaker, Clyde Clarence : Orange,	Law gr.,	Delta Chi
A. B., Stanford, 1910.		
Shriver, Harold Dexter : Eureka, Utah,	E. E. 12,	Los Altos L
Sickler, Jack Miller : Pasadena,	Geol. 10,	Zeta Psi
Sieber, Bertha Wilhelmina : Woodland,	Lat. 105,	Pi Beta Phi
Siefert, Alfred L. Camille : Pasadena,	Med. gr.,	2121 Buch'n S.F.S.
A. B., Stanford, 1911.		
Sim, Douglas Hamilton : San Jose,	Pre L. 30,	Sigma Alpha Ep.
Simon, Cecil Stocker : Los Gatos,	M. E. 81,	172 Encina
[1]Simonds, Sarah Louise : Pasadena,	Econ. 80,	Delta Gamma
Simons, Ada Beatrice : Fresno,	Graph. 93,	29 Roble
Simonson, Stanley Stoddard : Merced,	Hist. 13,	Delta Upsilon
Simpson, William Edward : Bakersfield,	Law sp. 69,	Delta Chi
Sinclair, Brevard Davidson : Berkeley,	Pre L. sp. 11,	Sigma Al. Ep.
[1]Sinclair, Ewart G. : Kalispell, Mont.,	Geol. 124,	318 Emerson P
A. B., Stanford, 1912.		

Singer, Dorothy Elizabeth : San Diego, A. B., University of Nevada, 1909; A. M., 1910.	Grk. gr.,	6 Madrono
Single, Forrest Edwin : Stockton,	Pre L. 44,	Zeta Psi
Sizer, Randolph Spelman : Palo Alto,	Law sp. 13,	281 Addison P
Skinner, John Kenneth : Los Angeles,	Geol. 82,	Sigma Nu
Skolfield, Esther May : Portland, Ore., A. B., Stanford, 1912.	Phyl. gr.,	Cupertino C
Skolfield, William King : Portland, Ore.,	E. E. 14,	144 Encina
[1]Sloss, Louis Jr. : San Francisco,	M. E.,	40 Encina
[1]Small, Horatio L. : Palo Alto, A. B., Stanford, 1911.	Geol. gr.,	334 Cowper P
Smiley, Frank Jason : Berkeley,	Bot. 67,	446 Hamilton P
Smith, Aubrey Miller : Chico,	E. E. 9,	620 Waverley P
Smith, Callie Sutherland : La Crescenta,	Hist. 46,	Delta Gamma
Smith, Chauncey : Elie, Man., Canada,	C. E. 117,	129 Emerson
Smith, Cordelia Madison : Venice,	Graph. 69,	Gamma Phi Beta
Smith, Curtis Easdon : Boise, Idaho,	C. E. 107,	405 Kipling P
Smith, Dorothea Louise : Campbell,	Hist. 14,	52 Roble
Smith, Edgar Clarence : Azusa,	Pre L. 83,	141 Encina
Smith, Elmer William : Ferndale, A. B., Stanford, 1912.	Anat. gr.,	712 Bryant P
[1]Smith, Felita Mary : Fresno, A. B., Stanford, 1912.	Germ. 120,	46 Roble
Smith, Harry James : Ferndale, A. B., Stanford, 1912.	Anat. gr.,	712 Bryant P
Smith, Mildred : Ferndale,	Germ. 46,	522 Emerson P
[2]Smith, Minnie Bertha : Olean, N. Y., A. B., Stanford, 1910.	Lat gr.,	Harker Sch. P
Smith, Olive Mabel : Manette, Wash.,	Phyl. 36,	Alpha Phi
[1]Smith, Stanley Bassett : Campbell, A. B., Stanford, 1912.	Hist. 123,	31 Encina
Smith, Talmage Laughner : Irwin, Pa.,	Pre L. 40,	199 Encina
Smith, Victor M. Jr. : Mountain View,	C. E. 30,	Mt. View M
Smith, Warren Locke : Ferndale,	Ent. 92,	712 Bryant P
[2]Smoot, Emma : Beaumont,	Rom L.,	Alpha Phi
Smyth, Glen Miller : Salt Lake City, U.,	Chem. 45,	Phi Gamma Del.
Snell, Lester William : Raton, N. M.,	Geol. 45,	195 Encina
Snyder, Gaylord K. : Cleveland, Ohio,	E. E. 72,	Beta Theta Pi
Sonntag, Charles Pringle : San Francisco,	Pre L. 8,	Kappa Alpha
Sontheimer, Urban Alexander : San Jose,	Pre L. 106,	172 Encina
Soper, Harold Calhoun : Palo Alto,	Pre L. 10,	Phi Kappa Psi

[1]Soule, Madeline : San Bernardino,	Engl. 90,	Kappa Alpha Th.
[1]Soule, Ruth : Alameda,	Hist. 28,	Kappa Alpha Theta
Spaan, Wilhelm C. : Mountain View,	Educ. gr.,	Mountain View M
A. B., Iowa College, 1906.		
Spalding, Philip Edmunds : Portland, Ore.,	C. E. 13,	19 Lasuen
Spellman, Thomas Joseph : Colma,	C. E. 72,	166 Encina
Spence, Homer Roberts : Alameda,	Pre L. 70,	Chi Psi
Squire, Edwin John : Claremont,	C. E. sp. 8,	195 Encina
[3]Squires, John Edwin Jr. : San Francisco,	Engl. 10,	11 Salvatierra
[1]Stafford, Clarence J. : San Francisco,	Pre L. 29,	Zeta Psi
Stafford, Kathleen : San Jose,	Lat. 82,	19 Roble
Stalder, Sydney Gordon : Riverside,	Econ. 14,	Kappa Alpha
Stammer, Walter Henry : San Jose,	Pre L. 47,	Delta Chi
Standish, Allan Morgan : Piedmont,	Econ. 46,	Beta Theta Pi
Stapleton, Leona Esther : Stanford Univ.,	Phyl. 12,	5 Lasuen
[1]Stark, Theodore Krueger : Los Angeles,	Econ. gr.,	Alpha Tau Omega
A. B., Stanford, 1911.		
Stauf, Ida : Palo Alto,	Germ. gr.,	1029 Ramona P
A. B., Stanford, 1910.		
Stearns, Edna Adele : Oakdale,	Hist. 41,	22 Lasuen
[2]Steele, Lester L. : Modesto,	Engl.,	845 Waverley P
Steele, Margaret Marion : San Jose,	Math. † 15,	656 Bryant P
Stein, Allan Thurman : Boise, Ida.,	Pre L.† 28,	359 Emerson P
Steinhart, Stanley Albert : Santa Clara,	E. E. 13,	Santa Clara S
[2]Steiny, Homer J. : Stockton,	Geol.,	Zeta Psi
Stellar, Arnold Thurlow : Hollywood,	Pre L. 13,	Delta Chi
Stendel, Dorothy Esther : Santa Maria,	Germ. 46,	12 Roble
Stephens, Harmon Bross : Crete, Neb.,	Econ. 9,	Cardinal Club
Stephenson, Burroughs A. : Los Altos,	C. E. 95,	Los Altos L
[1]Sterling, Faith : Minneapolis, Minn.,	Chem. gr.,	533 Bryant P
A. B., University of Minnesota, 1909.		
Stevens, Verne Genoa : Palo Alto,	Ent. 67,	926 Cowper P
[1]Stever, Robert Frederick : Redwood,	Law sp. 103,	Phi Kappa Psi
Stevick, Anna Laura : Palo Alto,	Engl. 71,	509 Hale P
Stewart, Brooxie C. : Pasadena,	Educ. 103,	12 Alvarado
Stewart, Clarence Edward : Stockton,	C. E. 9,	Chi Psi
Stewart, Edwin John : Los Angeles,	Geol. 95,	75 Encina
Stewart, Paul Eve : Pasadena,	Educ. gr.,	12 Alvarado
A. B., Stanford, 1912.		
Stewart, Robert Woodville : San Jose,	Pre L. 5,	132 Reed S. J. S.
Stidston, Russell Osborne : Palo Alto,	Engl. gr.,	757 Homer P
A. B., Stanford, 1911; A. M., 1912.		

Stillman, Dorothy Maxson : Stanford Un.,	Engl. 82,	2 Alvarado
Stillson, Grace Elizabeth : Palo Alto,	Hist. 39,	451 Ruthven P
Stolle, Francis : Palo Alto,	Med. gr.,	2124 Calif. S.F.S
A. B., Stanford, 1910.		
Stone, Herbert : Martinez,	Geol. sp. 81,	1229 Webster P
Stone, Laura Clair : San Jose,	Bot. 27,	12 Roble
[1]Stone, Lester Franklin : San Francisco,	C. E. 30,	Chi Psi
Strickler, Gertrude Aline : Denver, Colo.,	Graph. 47,	Delta Delta Delta
Strickler, John Philip : Vista,	Phyl. 71,	Kappa Alpha
Strickler, Lynda Louise : Denver,	Rom. L. 109,	Delta D. Delta
Stuart, Archer Bell : Palo Alto,	E. E. 11,	621 Gilman P
[1]Stuart, Donald Bostwick : Portland, Ore.,	Pre L. 56,	Sigma Nu
Stuart, Mary Virginia : Redlands,	Math. gr.,	25 Roble
A. B., Stanford, 1911.		
Sudden, Ruth Catherine : Ventura,	Hist. 106,	21 Lasuen
Suehiro, Matsunosuke : Yamaguchi, Japan,	E. E. 53,	1400 Waverley
[1]Sugino, Shigeichi : San Francisco,	C. E. sp. 52,	Japanese Club
Suits, Elihu Edward : Santa Monica,	M. E. 54,	81 Encina
Sullivan, Albert Patrick : Hollister,	Phyl. 12,	153 Encina
Summerfield, Lester D. : Reno, Nev.,	Pre L. 114,	85 Encina
Sutter, Milton Leroy : Hamburg, N. Y.,	Econ. 101,	187 Encina
Suzuki, T. : Yamanashiken, Japan,	Phil. 78,	1098 Emerson P
Svenson, Arthur Edward : Los Angeles,	Geol. 12,	620 Waverley P
[1]Swafford, Henry Watson : San Jose,	Econ. 98,	Sigma Alpha Ep.
Swabey, William Curtis : Riverside, Ill.,	Phil. 14,	545 Forest P
Swan, Guy Carleton : Lawrence, Mass.,	Chem. 71,	68 Encina
[1]Swan, John Fletcher : Santa Rosa,	Econ. 39,	Kappa Alpha
Swanson, Charles Raymond : Fresno,	C. E. 43,	136 Encina
Swayne, Lloyd : Alameda,	M. E. 10,	Kappa Sigma
Sweet, Lloyd Dudley : Chinook, Mont.,	Econ. 73,	184 Encina
Swem, Harry Archie : Salt Lake City, U.,	Geol. 53,	Sigma Chi
Swift, Faith A. : Santa Cruz,	Zool. 107,	323 Hamilton P
Swingle, Clarissa Winifred : Long Beach,	Hist. 14,	62 Roble
Taber, Arthur Pratt : Red Wing, Minn.,	E. E. 69,	249 Kipling P
[1]Tabor, Clarence Edward : Eureka,	C. E. 120,	Alpha Tau Omega
A. B., Stanford, 1912.		
Taff, Elizabeth Simonds : Palo Alto,	Graph. 12,	628 Cowper P
Tag, Tessie : Los Angeles,	Germ. 86,	43 Roble
Taggart, Kathrine : Los Angeles,	Lat. 54,	Delta Gamma
Talbert, Wilford Ebenezer : Highgrove,	Educ. 17,	317 High
[2]Talboy, William Eugene : Palo Alto,	Hist., 130,	311 Middlefield P

Tanner, William Roy : Ventura,	Educ. 108,	21 Salvatierra
Taylor, Arthur : Los Angeles,	C. E. 106,	Phi Delta Theta
Taylor, Charles Chappell : Selma,	C. E. 100,	83 Encina
Taylor, Leroy Edward : Palo Alto,	Econ. 91,	244 Webster P
Taylor, Louis John : Los Angeles, A. B., Stanford, 1912.	Geol. gr.,	Alpha Tau Omega
[1]Taylor, Thomas Flint : Beaumont,	Med. †,	5 Lasuen
Templeton, Eugene C. : Palo Alto, A. B., Stanford, 1910.	Geol. gr.,	375 Everett P
Templeton, Ruric R. : Palo Alto,	Geol. 6,	375 Everett P
[1]Terry, Marcus Claude : Brighton, Ia.,	Bact. sp.,	536 Middlefield Rd.
Terry, Zebulon A. : Los Angeles,	Econ. 46,	Delta Tau Delta
Test, Lawrence Cook : Pasadena,	Graph. 15,	16 Salvatierra
Thalheimer, Walter : Phoenix, Ariz.,	Pre L. 13,	2 Lasuen
Thoburn, Wilbur William : Palo Alto,	Econ. 11,	Phi Delta Theta
Thomas, Earl Charles : Portland, Ore.,	C. E. 48,	53 Encina
Thomas, James Carl : Las Vegas, Nev.,	Pre L. 100,	Delta Tau Delta
Thompson, Charlotte Seeber : Los Gatos,	Lat. 13,	66 Roble
Thompson, Georgia Emily : San Diego. A. B., Stanford, 1911.	Med. gr.,	2121 Buch'n S.F.S.
Thompson, Mildred H. : Buffalo, N. Y.,	Educ. 57,	21 Lasuen
Thompson, Roy Burton : San Jose.	Educ. 55,	5 S. Lincoln S.J.S.
Thompson, Thomas West : Palo Alto,	Geol. 106,	909 Alma P
Thompson, William F. : Everett, Wash., A. B., Stanford, 1911.	Zool. gr.,	32 Encina
Thorburn, Robert R. : Los Angeles,	Chem. 16,	Chi Psi
[1]Thoreson, Laurence Letts : Los Gatos,	Pre L. 29,	535 High P
Thornton, Ralph Peirce : Berkeley,	Pre L. 6,	Theta Delta Chi
Thurmond, Hugh Gwyn : Carpenteria,	C. E. 106,	107 Encina
Tilton, Lloyd Irvine : Bakersfield,	Pre L. 45,	Delta Chi
Tincher, Eugene Earl : Long Beach,	Pre L. 83,	Faculty Club
[2]Tisdale, Marjorie Minnie: Redlands,	Pre L. 20	Delta Gamma
Tittle, Ward Clark : San Francisco,	Law sp. 84,	120 Encina
Titus, Lela Juanita : San Diego,	Graph. 47,	20 Madrono
Tognazzini, Irene Amanda : Cayucos,	Phyl. 68,	39 Roble
[1]Tompkins, Thomas Brooke : Los Angeles,	Law sp. 4,	395 No. 3 S.J.S
Topham, James Scott : Washington, D. C.,	C. E. sp. 92	146 Hawthorne P
Toy, Susan Maud : Santa Maria,	Educ. 101,	1 Alvarado
Toyama, Hisao : San Francisco,	Grk. sp. 6,	407 Waverley P
Trace, Gertrude May : San Jose,	Educ. 70,	730 Univ. S.J.S
Trask, George Harlan : Los Angeles,	C. E. 73,	95 Encina

Trent, Leonore Evelyn : Los Angeles,	Engl. 15,	Alpha Phi
[1]Trogden, Arthur Roy : Santa Clara,	Chem. sp. 12,	Santa Clara S
[2]Trommald, Joseph Alexander : Portland,	Phyl. sp.,	417 Bryant P
Trost, Helen Gertrude : San Jose,	Educ. 99,	396 So. 6 S.J.S
[1]Troy, Matthew : Portland, Ore.,	C. E. 20,	Sigma Chi
[1]Tsuzuki, Mitsuji : Kumanoto-Ken, Japan,	E. E. sp. 82,	1015 Forest Ct.
Tucker, Warren Jr. : Redlands,	Pre L. 98,	Delta Chi
Tulloch, Leslie S. : Kohala, H. T.,	Zool. 46,	Mariposa
Tulloch, Martha : Kohala, H. T.,	Hist. 47,	Mariposa
[2]Tully, Mabel Irene : San Jose,	Educ.,	358 N. 7th S. J. S.
Tully, Wilford Hamilton : San Jose,	Pre L. 42,	358 No. 7th S.J.S.
[2]Turner, Frank Warren : San Francisco,	Geol. sp. 136,	840 Cal. S.F.S.
[1]Turner, Thomas Norton : San Francisco,	Geol. 107,	Sigma Alpha Ep.
Turpin, Charles Sawyer : Mill Valley,	Pre L. 65,	Delta Tau Delta
[2]Turpin, Jere : Angel Island,	Span. 57,	14 Salvatierra
Tuttle, Mildred E. : Salt Lake City, U.,	Frn. 14,	Mariposa
Tuttle, Ruth Claire : Watsonville,	Germ. 58,	22 Lasuen
[2]Tuttle, Winnifred Mary : Pacific Grove,	Lat.,	Roble
Twombly, Margaret Marie : Palo Alto,	Phyl. 110,	Mariposa
Usinger, Mabel Harriet : Alameda,	Lat. gr.,	415 Lytton P
A. B., University of California, 1911.		
Utley, Harry Meredith : San Diego,	Pre L. 10,	177 Encina
Vail, Arthur Jacob : Palo Alto.	E. E. 14,	333 Channing P
Vail, Helen : Palo Alto,	Econ. 48,	333 Channing P
Valentine, Jean Mae : Los Angeles,	Engl.55,	Kappa Kappa Gam.
Van Alstine, Roy D. : Mitchell, S. Dak.,	C. E. † 17,	6 Encina
Vanderburg, Chester Marion : Coalinga,	Phyl. 49,	750 Bryant P
Vandervort, Charles T. : Santa Cruz,	M. E. 10,	Encina
Van Dyke, Benjamin Franklin : Ukiah,	Law sp. 67,	158 Encina
[2]Van Etten, Ilza Katrine : Palo Alto,	Hist. 27,	465 Hawthorne P
Van Sicklen, W. J. : Castleton, Ont., Can.,	Chem. gr.,	347 Ramona P
A. B., Stanford, 1912.		
Van Zwalenburg, Bertha F. : Riverside,	Germ. 103,	Delta Delta Delta
Van Zwalenburg, Marian J. : Riverside,	Educ. 11,	Delta Delta Delta
Vaughn, Romney Leigh : San Francisco,	C. E. 74,	95 Encina
Vertrees, May : San Jacinto,	Span. 101,	40 Roble
Vickers, Joseph W. : Los Angeles,	Pre L. 100,	43 Encina
Vickrey, Richard Lee : Los Angeles,	Hist. 10,	Kappa Sigma
Vickrey, William W. : Los Angeles,	Econ. 59,	Kappa Sigma
[2]de Vilbiss, Lois Imelda : San Francisco,	Hist.,	Madrono
Virmani, Devi Dyal : Bahawalpori, India,	Chem. sp. 59,	245 Ramona

Volkmor, Mary Hilda : Whittier,	Math. 70,	Mariposa
von Geldern, Chas. Ernest : S. Francisco,	Med. †,	1926 B'dway, S.F.S.
[2]Vrang, Christion Madsen : Dawson, Y. T.,	Geol. sp. 39,	Sigma A. Epsil.
Wada, Totara : Berkeley,	Econ. 103,	37 Salvatierra
Waddell, Mary Lucile : Princeton, Ill.,	Zool. 105,	4 Roble
Wade, Gustav : Naples,	E. E. sp. 117,	107 Encina
Waelty, Waldo Ralph : Santa Clara,	Ch. 77,	831 Grant, S. Clara S
Wagner, Elizabeth D. : San Jose,	Educ. 49,	11 Roble
Wagner, Hubert Hudson : San Jose,	C. E. 46,	355 Reed S.J.S
Wagner, Vesta Marion : Ventura,	Engl. 76,	Kappa Alpha Th.
Wait, Robert Cyrus : Reynolds, Ill.,	Pre L. 97,	Sigma Chi
Wakeman, Earl Seeley : Palo Alto,	Law gr.,	521 Cowper P
A. B., Stanford, 1911.		
Walker, Harold Nelson : Spokane, Wash.,	E. E. 49,	334 Waverley P
Walker, Leland Harrison : Los Gatos,	Pre L. 99,	Los Gatos L
Wallace, Bruce : Visalia,	Geol. 94,	Chi Psi
[1]Wallace, Gertrude E. : Ocean Park,	Engl. 89,	Delta Delta Delta
Wallace, Helen : Visalia,	Engl. 14,	Kappa Kappa G.
[1]Wallace, Roger Wayne : Indianapolis, Ind.,	Law. gr.,	1001 Ramona P
A. B., Butler College, 1909.		
Wallach, Guss Valentine : Boonville,	C. E. 72,	70 Encina
Walls, Eleanor Prescott : Los Angeles,	Hist. 12,	Delta Gamma
Walton, Lois Mae : Santa Barbara,	Engl. 73,	Alpha Omicron Pi
Walton, Loren Lee : Alva, Okla.,	Law sp. 5,	67 Encina
Ward, Alma Jane : San Francisco,	Educ. 66,	1 Madrono
Ward, Butler Etter : San Diego,	E. E. 45,	Kappa Alpha
Ward, Marion : Los Angeles,	Hist. 47,	Kappa Kappa Gam.
Ward, Martin Luther, Jr. : San Diego,	Pre L. 102,	122 Encina
Ward, Matthew : Antioch,	Law sp. 40,	415 Lytton P
Ward, Newman : Portland, Ore.,	Geol. 48,	167 Encina
Ward, Paul Philip : San Diego,	Pre L. 101,	122 Encina
[1]Waring, Clarence Almon : Mayfield,	Geol. gr.,	Mayfield
A. B., Stanford, 1911.		
Warren, Esther : Bakersfield,	Phys. 12,	Alpha Omicron Pi
Warren, William Halford : Glendora,	M. E. 9,	144 Encina
Warthorst, Bertha Lydia : Bakersfield,	Phys. gr.,	31 Roble
A. B., Stanford, 1911.		
Washburn, Henry Lord : San Jose,	Bot. 23,	4 Lasuen
Washburne, Carleton Wolsey : Sierra M.,	Phyl. 84,	525 Lincoln
[2]Washburne, Dorothea : Sierra Madre,	Engl. †	525 Lincoln
Washburne, John Noble : Sierra Madre,	Engl. 31,	525 Lincoln

Wason, Thomas Frederick : Santa Paula, C. E. 31, Encina
Watanabe, Walter : San Francisco, Chem. sp. 61, Japanese Club
Waterman, Herbert Alton : San Francisco, C. E. 104, Alpha Tau Omega
Waters, Pearl Elizabeth : Santa Clara, Math. gr., 59 Roble
A. B., Stanford, 1912.

Watkins, Fred Bradshaw : Los Angeles, Chem. 40, 185 Encina
Watkins, Vida Mildred : Kingman, Ariz., Bot. 107, 45 Roble
Waud, Joyce Emily : Ventura, Bot. 44, Kappa Kappa Gam.
Waugh, Clarence W. : Brooklyn, N. Y., Phyl. 100, 19 Encina
Weaver, Eva Ray : Palo Alto, Germ. 75, 656 Channing P
Weaver, Kent Mercer : Portland, Ore. Hist. 33, Phi Kappa Psi
Weaver, William Irwin : Palo Alto, Chem. 61, 656 Channing P
Weedmark, George Ryan : Porterville, M. E. 10, 2 Lasuen
Wegis, Antone Henry : Rosedale, Geol. 14, 4 Lasuen
[1]Weller, Lawrence L. : Waitsburg, Wash., Econ. 30, Chi Psi
Wells, Agnes Booth : Oakland, Hist. 13, 21 Lasuen
Wells, Edwin Adams, Jr. : San Diego, Pre L. 38, Phi Delta Theta
Wendling, Florence M. : San Francisco, Hist. 107, Kappa Kappa Gam.
Wenk, Morris : Stanford Univ., E. E. 134, 25 Salvatierra
West, Howard Frank : Los Angeles, Phyl.-Med. 101, 230 Kell'g P
Wetmore, Clyde T. : Hollister, Phyl.-Med. 101, Encina
Weymouth, Frank W. : Tacoma, Wash., Zool. gr., 32 Encina
A. B., Stanford, 1909; A. M., 1911.

Weyse, Alice Caroline : Los Angeles, Hist. 86, Alpha Omicron Pi
Whaley, Guy Vernellen : Pomona, Educ. 103, 826 Waverley P
Wheeler, Elizabeth Mayo : San Jose, Hist. 15, Madrono
Whelan, Eva Blanche : Los Angeles, Hist. 104, Madrono
Whipple, Stephen K., Jr. : Burlingame, C. E. 64, Burlingame B
Whitaker, Ralph W. : Lebanon, Ind., C. E. 73, Delta Upsilon
White, Esther Hope : Humboldt, Ia., Hist. gr., 1 Alvarado
A. B., Rockford College, 1910.

White, Hazel May : Burlingame, Chem. 6, Burlingame B
White, Herbert Eustice : Sacramento, Law gr., 116 Encina
A. B., Stanford, 1911.

[2]White, Phebe Anna : Kingfisher, Okla., Lat. gr., Roble
A. B., Kingfisher College, 1904; A. M., Stanford, 1911.

White, Printess : St. Charles, Ia., Phyl. sp. 27, 113 Circle P
White, Walter T. : Portland, Ore., Pre L. 15, 949 Emerson P
Whiting, Dwight : Los Angeles. Econ. 25, Alpha Tau Omega
Whitney, Charles Willard : San Ardo, E. E. 12, 103 Encina

Whittemore, Elsie Louise : Alhambra, A. B., Stanford, 1912.	Germ. gr.,	69 Roble
Whittemore, J. R. : Los Angeles,	Law sp. 87,	Phi Kappa Psi
Wichman, Frederick W. : Honolulu, H. T.,	Hist. 40,	Phi Kappa Psi
[2]Wickersham, Wilmot : Los Angeles,	E. E.,	Kappa Sigma
Wilcox, Robert W. : Delta, Colo.,	Phyl. 70,	126 Encina
[1]Wilcox, Uthai Vincent : Mountain View,	Engl. sp.,	Mountain View M
Wiles, Coral Agnes : Chico,	Engl. 75,	35 Roble
Wilkins, Edith Amelia : Bolinas, A. B., Stanford, 1911.	Bot. gr.,	54 Roble
Will, Elsa : Rochester, N. Y.,	Phyl.-Med.79,	K.AlphaTheta
Willard, Florence : Pasadena,	Math. 13,	Alpha Phi
Willard, Frankie : Calexico, A. B., Stanford, 1911.	Ent. gr.,	22 Lasuen
[2]Willey, Frances Caroline : Point Loma,	Engl.,	737 Bryant P
[1]Willfong, George W. : Hilo, Hawaii,	Econ. sp. 28,	Phi Kappa Psi
Williams, Carl Francis : Los Angeles,	M. E. 8,	5 Lasuen
Williams, Edle Carolyn : Gustine,	Graph. 44,	345 Hamilton P
Williams, Florence : Los Angeles, A. B., Stanford, 1911.	Bot. gr.,	1115 Ramona P
Williams, Harry Kingsley : Los Angeles,	C. E. 60,	115 Encina
Williams, J. Harold : Ainsworth, Nebr.,	Educ. 14,	251 Emerson
Williams, Laurence Davis : Yuba City,	C. E. 100,	84 Encina
Williams, Sydney Lloyd : Redwood City,	Pre L. 47,	Redwood City R
Wilson, George Osborne : Saratoga,	E. E. 51,	Saratoga
Wilson, James F. : Little Rock, Ark.,	C. E. 94,	55 Encina
Wilson, Neill Compton : Oakland,	Econ. 107,	Delta Tau Delta
[1]Wilson, Walter Victor : Vallejo,	Pre L. 24,	Phi Kappa Psi
Wilson, Weston Stephens : Los Angeles,	Econ. 69,	Zeta Psi
[2]Wiltz, Lena G. : San Jose,	Graph. 105, 16	Lucretia SJS
Wines, Blaine L. : Ruby Valley, Nev.,	Pre L. 9,	Sigma Alpha Ep.
Wing, Sumner Paddock : Palo Alto,	C. E. 51,	345 Lincoln P
Winn, Vera Lutitia : Palo Alto,	Gk. 16,	1102 Ramona P
Winters, Verne W. : Spokane, Wash.,	M. E. 112,	Phi Delta Theta
Wiseman, Alta Echo : Famosa,	Phys. 107,	24 Roble
Wishard, Alice Mary : Mountain View,	Graph. 102,	251 Emerson P
[2]Wishard, Harry Albert : Bloomfield, Ia., Ph. B., Iowa Wesleyan College, 1911.	Law gr.,	5 Lasuen
Wishard, Helen Louise : Mountain View,	Germ. 77,	251 Emerson P
Wolcott, Herbert Betts : Carthage, Mo.,	Geol. 36,	50 Encina
[2]Wolff, Carrie Boole : San Fernando,	Engl. 41,	1147 Byron P

Wolff, Franklin F. : San Fernando, A. B., Stanford, 1911.	Math. gr.,	Kellogg nr Em. P.
Wolford, Edwin Byron : Oakland,	E. E. sp. 12,	Sigma Nu
Wollaston, Charles Hyde : Santa Ana,	C. E. 63,	20 Encina
[2]Wong, Ralph Buckland : San Francisco,	C. E.,	318 Emerson
Woo, Moi Lee : Tulare,	C. E. 4,	318 Emerson
Wood, Arthur Rollit : Saratoga,	Econ. 12,	118 Encina
Wood, Dorothy Augusta : Palo Alto,	Phyl. 44,	1757 Waverley P
Wood, Edward Huffner : Escondido,	Pre L. 69,	90 Encina
Wood, Frederick Bertram : Palo Alto, A. B., Stanford, 1910.	Law gr.,	Acacia
Wood, Granville Numan, Jr. : Blue Lake,	Law sp. 38,	Phi Kappa Psi
Wood, Harry Reynolds : Van Buren, Ark.,	Engl. 34,	Phi Kappa Psi
Wood, Jacqueline : Seattle, Wash.,	Hist. 8,	Alpha Omicron Pi
Wood, Jessie Ida : Mayfield,	Bot. 14,	Mayfield M
Wood, W. Welcome : Interior, S. Dak., B. S., Huron College, 1909.	Med. † 5,	359 Emerson P
[1]Woodcock, Elbert Cecil : Portland, Ore., A. B., Stanford, 1910.	E. E. gr.,	134 Encina
[2]Woodhams, Clifton Henry : Redwood,	M. E.,	Redwood R
Woolley, James Earl : Santa Rosa,	Pre L. 81,	13 Encina
[2]Wooley, Kenneth Rich : Crescent City,	Law sp.,	335 Lytton P
Workman, Gertrude D. : Los Angeles,	Engl. 102,	Delta Gamma
Workman, Thomas Edgar : Los Angeles,	Geol. 8,	Beta Theta Pi
Wormser, Paul : San Francisco,	E. E. 11,	42 Encina
Worswick, George Draper : San Jose,	Econ. 57,	Sigma Alpha Ep.
[1]Worthington, Robert Strong : Alameda,	Geol. 61,	185 Encina
Worthy, Arthur Edwin : Santa Ana,	Pre L. 15,	19 Lasuen
Worthy, Elmer Thomas : Santa Ana,	Pre L. 49,	23 Encina
Wright, Ardelle F. : Palo Alto,	Bot. 10,	611 Waverley P
[2]Wright, Chester A. : Cambridge City, Ind.,	Pre L.,	la Alvarado
Wright, George Ireland : Pasadena,	E. E. sp. 73,	Phi Gamma D.
Wright, Howard Walter : Pasadena,	Pre L. 10,	Beta Theta Pi
Wyant, Carlton Levi : Montecito,	C. E. 76,	117 Encina
Wyman, Eleanor M. : San Luis Obispo,	Lat. 46,	Mariposa
Wynne, Arthur William : San Anselmo,	Engl. 16,	2 Lasuen
Yamada, Sozaburo : Los Angeles,	Phyl. sp. 12,	Japanese Club
Yeary, Malcolm Leland : Los Angeles, A. B., Stanford, 1912.	Lat. gr.,	16 Salvatierra
Yoch, Agnes Cecilia : Santa Ana,	Span. 90,	1 Alvarado
Yokozeki, Hirosaburo : Kagawa, Japan,	Econ. 74,	Japanese Club

Yost, George Herbert : Palo Alto, A. B., Stanford, 1900.	Engl. gr.,	260 Churchill P
Young, Frances P. : Eugene, Ore., A. B., University of Oregon, 1910.	Hist. gr.,	13 Roble
Young, Frank Herbert : Fort Jones,	Econ. 79,	Theta Delta Chi
Young, Hayes Wilson : Stanford Univ., A. B., Stanford, 1911.	Geol. gr.,	109 Encina
[1]Young, Sarah Irene : Salt Lake City, Utah, A. B., Stanford, 1912.	Eng. 120,	47 Roble
Young, Stanley Colin : San Jose,	Pre L. 95,	189 Encina
Youngman, Amanda Louise : Los Angeles, A. B., Wellesley College, 1910.	Chem. gr.,	1 Alvarado
[1]Zimmerman, Ila Mae : Susanville,	Graph. 17,	21 Lasuen
Ziser, George J. : Los Angeles,	Chem. 15,	620 Waverley P

Special Workers in Anatomy

[2]Baer, Adolph Bernhardt : San Francisco, M. D., California, 1903.	Anat.,	3757 Clay S. F. S.
[2]Coates, Horace Weldon : Vancouver, B.C. M. D., McGill, 1901.	Anat.,	1329 Green S.F.S.
Downing, Edgar Dale : San Francisco, M. D., Cooper Medical College, 1911.	Anat.,	Clay & Webster S.F.S.
[2]Frankenheimer, Julius B. : San Francisco, A. B., Stanford, 1896; M. D., Cooper Medical College, 1898.	Anat.,	240 Stockton S.F.S.
Schaller, Walter F. : San Francisco, M. D., Cooper Medical College, 1902.	Anat.,	783 Ashbury, S.F.S.

SUMMER SESSION, 1911

Field Geology

Andresen, Ludwig Paul
Cheda, Gilbert Ernest
Cheda, Henry Prosper
Corbet, Edward Burke
Crandall, Darell
Fox, Philip Benton
Garner, Aubrey Hamilton
Humphrey, Harry Frank
McCullough, A. Stafford
McNair, Stuart Strathy
Sinclair, Ewart G.
Smart, Ornan Bridges
Soper, Ralph Hamilton
Thompson, Thomas West
Turner, Thomas Norton

Marine Biological Laboratory

1. *Occupying Investigators' Rooms*

Allen, W. S., Graduate Student University of Illinois
Beck, R. J., Assistant in Ornithology, Alexander Museum of Vertebrate Zoology, University of California
Gilbert, Charles Henry, Professor of Zoology, Leland Stanford Jr. University
Greene, Charles W., Professor, University of Missouri
Stevens, Dr. Nettie M., Bryn Mawr College, Pa.
Kline, George T., Biological Artist and Technician, University of Missouri
Judy, H. Y., Artist of the Brooklyn Institute Museum, Brooklyn, N. Y.

2. *Taking Regular Courses*

Atkinson, Arthur Garratt
Bolin, John Siegfried
Bower, Albert G.
Brown, Marguerite
Clark, Birge M.
Dice, Lee Raymond
Ford, Nell Elizabeth
Hayward, Ida Rickard
Hempl, Elsa
Johnson, Carrie Jette
Lewis, Charles Granville
Moore, Virginia
Owen, Ethel
Payne, Ira Dawson
Peck, Gladys Amiel
Rounds, Merle Ballard
Sanborn, Gertrude Elizabeth
Steinbeck, Esther
Tag, Tessie
Thomas, James Carl
Tognazzini, Irene Amanda
Twombly, Margaret Marie
West, Howard Frank
Will, Elsa

SUMMARIES

Officers

Trustees		15
Faculty		
Professors	61	
Associate Professors	28	
Assistant Professors	37	
Instructors	46	
Lecturers	3	
Departmental and other Assistants	144	
Business Office	20—	339

Students

Graduates		
Accepted Candidates for Degree of A. M.	97	
Accepted Candidates for Degree of Engineer	12	
Accepted Candidates for Degree of J. D.	31	
Accepted Candidates for Degree of M. D.	19	
Accepted Candidates for Degree of Ph. D.	19	
Other Graduate Students	38—	216
Undergraduates		1454
Special Students		104
Total		1774
Summer Registration	46	
Less names already counted	31—	15
Total (including Summer Registration)		1789
Special Workers in Anatomy		6

By Major Subjects	Graduate	Under-Graduate	Special	Total
Greek	3	6	1	10
Latin	16	22	—	38
Germanic Languages	10	67	1	78
Romanic Languages	1	34	—	35
English	23	114	2	139
Psychology	1	5	—	6
Philosophy	—	5	—	5
Education	12	40	—	52
History	16	169	3	188
Economics and Social Science	7	123	6	136
Law	33	*51	29	113
Pre Legal Course	—	171	6	177
Graphic Art	3	50	—	53
Mathematics	6	18	—	24
Applied Mathematics	—	1	—	1
Physics	6	8	1	15
Chemistry	15	62	5	82
Botany	3	26	—	29
Physiology and Histology	5	67	4	76
Anatomy	4	—	—	4
Bacteriology	—	—	1	1
Zoology	5	9	—	14
Entomology	5	12	1	18
Geology and Mining	12	82	4	98
Civil Engineering	5	155	19	179
Mechanical Engineering	2	49	7	58
Electrical Engineering	5	102	13	120
Medicine	18	†16	1	35

* Seniors in Pre Legal Course counted as Law Majors.

† Also registered as Physiology Majors, 9; Chemistry Majors, 1.

By Residence

California	1377	Kentucky	4
Washington	48	Wisconsin	4
Oregon	41	Tennessee	3
Illinois	20	Arkansas	2
Utah	19	Connecticut	2
New York	20	District of Columbia	2
Idaho	16	Maine	2
Iowa	16	Michigan	2
Hawaii	16	New Jersey	2
Nevada	15	Wyoming	2
Ohio	14	North Carolina	1
Arizona	12	Vermont	1
Colorado	10	Japan	15
Indiana	10	Canada	7
Nebraska	9	Mexico	3
New Mexico	9	Australia	2
Minnesota	8	China	2
Montana	8	Ecuador	1
Massachusetts	7	England	1
Missouri	7	France	1
Kansas	6	India	1
Pennsylvania	6	Ireland	1
South Dakota	6	Korea	1
Texas	5	Salvador	1
Oklahoma	5	Switzerland	1

ALUMNI ASSOCIATION

[Organized June 15, 1892]

CONSTITUTION

(As amended May, 1908)

In order to promote the interests of the University, to secure unity among its graduates, and to foster an attachment to our *Alma Mater,* we do hereby constitute ourselves an association to be known as the Alumni Association of the Leland Stanford Junior University.

I. MEMBERSHIP

1. All persons who have received a degree from the Leland Stanford Junior University are members of this Association.

2. All members of the Faculty are honorary members of this Association.

II. OFFICERS

1. The officers of this Association shall be: (1) a President; (2) one Vice-President for each successive group of five classes (provided that when the last group shall number three classes it shall thereafter be entitled to a Vice-President); (3) a Secretary-Treasurer; (4) an Executive Committee consisting of the Secretary-Treasurer and four other elected members, one of whom shall be designated as Chairman, but the President shall not be a member of the Committee; and (5) an Advisory Board, consisting of the President, one representative elected by the graduating class for the term of one year, and nine elected members who shall be graduates of five years' standing, and who shall be elected for three-year terms. At the first election held subsequent to the adoption of this section the nine elected members shall be divided into three groups, the three receiving the highest number of votes shall hold office for three years, the three receiving the next highest shall hold office for two years, and the remaining three shall hold office for one year. Thereafter at each annual meeting there shall be elected three members for terms of three years each. The Advisory Board shall elect its President and Secretary.

2. All other officers shall serve for one year or until their successors are elected.

III. DUTIES OF OFFICERS

1. It shall be the duty of the President to preside at all business meetings of the Association, to deliver the President's address on Alumni Day, and to perform such other duties as usually belong to his office.

2. It shall be the duty of the Vice-Presidents, in the order of seniority of their groups, to preside in the absence of the President and to perform the other duties belonging to his office.

3. It shall be the duty of the Secretary-Treasurer to keep accurate minutes of the meetings of the Association and to act as Secretary of the Executive Committee, of which he shall be a member.

4. It shall also be the duty of the Secretary-Treasurer to have charge of the collection and disbursement of the funds of the Association.

5. The Secretary-Treasurer shall be allowed ten per cent of all dues or assessments collected, as compensation for his services.

6. It shall be the duty of the Executive Committee to arrange for the program to be presented on Alumni Day; or any program for other public occasions; to regulate the finances of the Association; to perform such other duties as may be imposed upon it; and to attend to all business of the Association not otherwise provided for.

7. It shall be the duty of the Advisory Board, when deemed advisable, to consult alumni, undergraduates, faculty, and trustees, and to make recommendations regarding the welfare of the University and of the Alumni Association.

IV. COMMITTEES

1. The President shall be ex-officio a member of all Committees, except the Executive Committee.

2. At each annual business meeting the President shall appoint a committee of two persons to audit the Treasurer's accounts.

V. ELECTIONS

1. The February issue of the *Alumnus* shall give notice of the annual nomination and election of officers of this Association. Said notice shall contain the names of the incumbent officers and shall indicate the hold-over members of the Advisory Board, and shall contain in full the provisions of this Constitution relating to nominations and elections.

2. Nominations in writing, signed by at least twenty members, shall be required for any nomination. Nominations shall be forwarded to the Secretary-Treasurer between the first day of February and the first day of April of each year. On or before the fifteenth day of April of each year, the Secretary-Treasurer shall mail to every member of this Association, whose address he knows, an official ballot containing all the nominations, with the addresses of the nominees and the number of proposers of each, and said ballot shall be published in the May issue of the *Alumnus*.

3. Officers shall be elected at an annual election to be held at Stanford University on Alumni Day, between the hours of nine o'clock A. M., and twelve o'clock noon. The Executive Committee shall have charge of the election. The elector may cast a written ballot in person, or by mail addressed to the Secretary-Treasurer, marked "Ballot" and disclosing the sender's name, and enclosing a ballot in a plain envelope. Ballots so received shall be opened and cast only during the hours of election. The respective candidates receiving the highest number of votes shall be declared elected. A tie vote shall be decided by lot.

4. No one whose annual dues are in arrears for the current year shall be entitled to vote or to hold office.

VI. DUES

The dues of the Association shall be $1.25 per year for each member thereof, which amount shall include a subscription to the *Alumnus*.

Provided, however, that all members who, prior to May 1908, have paid $5.00 shall be exempted from further dues.

VII. MEETINGS

Meetings of the Association may be called by the President or by petition of twenty members, said meetings to be held at Stanford University.

VIII. AMENDMENTS

Any proposition to alter or amend these Articles of Association must be proposed in writing, signed by twenty members, and submitted to the members by mail in printed form by the Secretary-Treasurer, and voted upon in the same manner as are nominations for officers, and adopted by a majority vote.

OFFICERS OF THE ASSOCIATION, 1911-12

President—BENJAMIN FRANKLIN BLEDSOE, '96.

Vice-Presidents—EARNEST BRYANT HOAG, '95; JOHN FELIX BARNETT, '97; MARY ISABEL MCCRACKEN, '04; MARY HUTCHINS, '09.

Secretary-Treasurer—JOHN EZRA MCDOWELL, '00.

Executive Committee—ALMON EDWARD ROTH, '09, Chairman; FRED LESLIE BERRY, '99; GILBERT DENISON BOALT, '03; HENRY HUNTLY TAYLOR, '00; JOHN EZRA MCDOWELL, '00.

Advisory Board—BENJAMIN FRANKLIN BLEDSOE, '96 (ex-officio); GEORGE ARMAND DITZ, class of 1911; EVELYN WIGHT ALLAN, '96; NEWTON CLEAVELAND, '99; THOMAS MARION WILLIAMS, '97; MICAJAH ANDERSON THOMAS, JR., '04; RICHARD WATTS BARRETT, '04; HERBERT COFFIN JONES, '02; DENNIS SEARLES, '95; WILLIAM WESLEY GUTH, '95; MARY LOCKEY, '02.

INDEX

Academic Committees.....37, 228
Academic Council 37
Accredited schools 42
Admission, conditions of.....41
first-year standing.....41
on examination 43
on recommendation 41
special students 52
advanced standing 52
for extra entrance units.....58
on examination 59
graduate standing 53
of women 53
Administrative committees.....37, 227
Administrative officers 226
Advanced standing.....52, 59
Advisory Board 37, 227
Alumni Association 297
Amount of work 56
Applied Mathematics.....130
Appointment Registry 72
Astronomy 132
Athletic Training 64, 147
Biblical History, entrance.....46
courses in.....96
Biology, entrance.....46
Biological Laboratory.....197
Bionomics 152
Bonnheim dissertations 206
scholarships 210
Botany, entrance 45
courses in.....140, 198
Buildings 39
Calendar 3
Candidacy for advanced degrees.....67
Carnot Medal 207
Catalogue of Students.....225
Chemical Engineering 139
Chemistry, entrance 45
courses in 135
Christian Associations 62
Civil Engineering 161
College Entrance Examination Board 43
Committees 37, 227
Conditions and failures 57
Conduct of students 60
Cost of living 62
Council, Academic 37
Courses of Instruction 74
Debates 207, 208
Degrees 66, 217
Departments 38, 226
Department faculties.....37
Directories 2, 225
Dormitories 39, 62
Drawings, entrance 50, 51
Dudley Herbarium.....143
Economics, entrance.....46
Economics and Social Science.....109
Education 99
Edward Berwick Junior Peace
Prize 209
Electrical Engineering 169
Encina Hall 39, 62
Engineering 160
chemical 139
civil 161
electrical .....:169
mechanical 165
mining 156
English, entrance 45
literature, courses in.....89
philology, courses in.....95
Enrollment 55
Entomology 152
Entrance units 41, 58
Entrance examinations 43
Entrance subjects 44
Essays on Total Abstinence 209
Etruscan 80
Esperanto 88
Executive Committee.....37, 228
Executive heads of departments.38, 226
Expenses 61, 62, 65
Extra entrance units 58
Faculty 5, 36
Fees, 61, 65, 125, 134, 140, 141, 146, 151, 153, 155, 160, 169, 173, 178, 185, 186, 198.
Forestry 140
Forum 211
Foundation 34
French, entrance 47
courses in 84
Geology and Mining 154
German, entrance.....48
Germanic Languages, courses.....80
Graduate standing 53

Graduation 66
Grammar School certificate 72
Graphic Art.....126
Greek, entrance 50
courses in 74
Guild, Students' 65
Gymnasiums 39, 147
Harvard Club Scholarship.....210
Health control, University.....64
High School Teacher's certificate 70
History, entrance 46
courses in 106
Honorable dismissal 60
Hospital 65
Hygiene, entrance 45
courses in 147
Information Bureau 62
Inn, University 39, 62
Intercollegiate Debates 207
Italian 87
Laboratory fees, *see* Fees
Latin, entrance 49
courses in 76
Law 112
Leave of absence 58, 60
Lectures, Recitals, Debates.....202
Leland Stanford Junior Museum.39, 214
Library 112, 173, 199
Major subject 56
Marine Biological Laboratory...38, 197
Mathematics, entrance 45
courses in 128
Mathematics, Applied.....130
Mechanical Engineering 165
Medical preparatory studies....139, 147
Medicine 40, 70, 173
Memorial Church 201
Memorial scholarship 210
Metallurgy 158
Mineralogy 154
Mining 156
Museums 39, 151, 153, 214
Music 41, 52, 202
Officers 5, 225
Organization 34
Pacific Coast Debates.....208
Paleontology 155
Philological Association 211
Philosophy 97
Physics, entrance.....45
courses in.....132
Physical Training 147
Physiology, entrance 45
Physiology and Histology 143, 198
Political Science 111
Pre-legal Curriculum 113
Probation 58
Psychology 98
Recommendations, teachers' 71, 74, 77, 81, 84, 89, 96, 99, 106, 126, 128, 134, 140, 141, 146, 151.
from preparatory schools.....41
Registration 55
Religious services 201
Residence, University 55
Rhodes Scholarships 210
Roble Hall 39, 62
Romanic Languages.....84
Scholarships 210
Science Association 212
Scientific collections 151, 153, 214
Self-support of students 63
Shopwork, entrance 51
Social Science 109
Spanish, entrance 47
courses in.....86
Special students.....52, 58
Special courses 59
State Normal Schools.....42, 52
Students, catalogue of.....225
Student Employment Bureau.....63
Students' Guild.....65
Summaries 294
Syllabus fees, *see* Fees
Teacher's certificates.....70
Teacher's recommendation, *see* Recommendations.
Trustees 4, 35
Tuition fees 61
Unit of credit, entrance.....41
in University work.....56
University assemblies.....204
University Conference.....213
University health control.....64
University Inn.....39, 62
University lectures, etc 202
University Library 199
University regulations 55
Vaccination 64
West Memorial Lectures.....205
Zoology, entrance 45
courses in 149, 198